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## EDUCATIONAL NEWS AND EDITORIAL COMMENT

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### PRESIDENTIAL ELECTIONS AND THE VOTE, 1892 TO 1956

I AM SURE that I need not apologize to the readers of the *School Review* if I depart from the usual topics and customary form of the news notes. The most important and newsworthy event of the year for all of us occurs on Election Day, November 6. We are all citizens. Whether our field is English, mathematics, French, science, or social studies, we all try to cultivate within our pupils a sense of civic duty. I think, therefore, that I am safe in assuming that you will be as interested as I am in what the political scientists call "voting participation" or in what may be here defined as the extent to which citizens eligible to vote in presidential elections actually do vote.

On Election Day a test of the nation's sense of political responsibility will be repeated for the fifteenth time in our century. This test has many of the characteristics a good test should have. In the testing situation the subjects—the voters—are free to choose between the two kinds of behavior in which we are interested: they may go to the polls and vote, or they may stay away from the polls and not vote. The subjects are not required to cast a vote. They are not coerced by threat of fine or sentence, and they are not prodded on to the polls at the point of a bayonet. They may vote

or not, as they like. In the testing situation the stimulus that plays upon them is the strongest of a political nature that exists in human society. The right to be exercised (or not to be exercised) is a fundamental one in a democratic system; the issues to be decided are the most critical that face the nation and the world; and the offices to be filled are the highest and the most powerful within the bestowal of any people. Every "first Tuesday after the first Monday in November," every fourth year, is, then, a day on which the nation's sense of political responsibility is tested and measured *à outrance*.

### *Voting participation, 1900 and 1952*

Will we do as well on the fifteenth repetition of this test in November, 1956, as we did when the test was first given in the twentieth century? Has the nation's sense of civic duty, as measured by this test, improved during the fifty-six years since 1900?

Let us begin to formulate an answer to these questions by comparing the per cent of potential voters who actually voted in 1900 with the per cent voting in 1952. Our term "potential voters" will include all male citizens, native-born and naturalized foreign-born, twenty-one years of age and over in 1900, and all male and female

civilian citizens twenty-one years of age and over (and in Georgia eighteen to twenty years of age) in 1952. Turning to the *Statistical Abstract of the United States, 1954*, we discover that in 1900 the number of potential voters was 18,973,994 and the number of actual voters in the presidential election, McKinley against Bryan, was 13,964,518, or 74 per cent of the potential voters. In 1952 the number of potential voters was estimated by the Bureau of Census as 95,627,000. The number actually voting was 61,551,919 or 64 per cent.

That voting participation was 10 per cent less in 1952 than in 1900 is surprising. We would expect the opposite. The automobile brings people to the polls more conveniently and speedily than Dobbin did. Radio and television have been added to the newspaper and the whistle-stop speech as avenues for presenting issues vividly and dramatically, for infecting us with the excitement of the convention and the campaign, and for arousing our loyalties and antipathies. Furthermore, to argue from challenge-response theory, in 1900 the nation's safety was not threatened from without, while in 1952 we were under heavy pressure from strong and hostile foreign countries. It would seem that in 1952 our people would have had a keener appreciation of their political system and would have cherished the right of suffrage more and so have been more eager to exercise that right.

The difference in voting participation between 1900 and 1952 is even more perplexing when we consider progress in our own field of education. If we study school enrolment decade by decade over the last hundred years, we shall find a steady increase in the per cent of children of school age attending school, in the number of days they spend in school during the school year, and in the number of years that they stay in school. Children now receive more education (horizontally and vertically, so to speak), and this education, we would maintain, is far superior to that of seventy or eighty years ago. It is inconceivable that the old, narrow, "my country right or wrong" history, memorized as a chronicle of

facts, learned from a drab textbook, and recited to a stern taskmaster, was more successful than our modern social-studies program is in developing a sense of political responsibility as reflected by voting participation.

#### *Voting participation, 1892-1952*

Perhaps the presidential elections of 1900 and 1952 are somehow peculiar and do not give us representative figures. Let us work out the per cent of voting participation for each election in the years between 1900 and 1952. We shall push our base year back beyond 1900 to a quiet, dull election in which the turnout of voters was not influenced by magnetic personalities or stirring issues. The election of 1896 will not do, for one of the candidates was the young William Jennings Bryan ("Bryan the Bold," "Bryan the Peerless One"), and a single, burning issue—the free coinage of silver at a ratio of 16 to 1—aroused the fears and hopes of city and country. More suitable will be the sedate Cleveland-Harrison election of 1892.

The number of votes cast in each election we shall again get from the *Statistical Abstract of the United States, 1954*. For data on potential voters we shall have to resort to various sources, to the *Statistical Abstract*, the *Historical Statistics of the United States*, the *Census*, and one of the *Current Population Reports*. Our final figures will not be perfectly precise because we shall have to interpolate between the nearest sets of census statistics, but they will be good enough to permit comparisons.

An examination of Table 1 will show that the elections of 1900 and 1952 are fairly good ones for our purpose. We get results not much different from those we have already obtained if we look at the first twenty years and the last twenty years of the sixty-year period. The median per cent of voting participation in the first five elections is 74, in 1900; the median per cent in the last five is 61, in 1936. It is clear that voting participation in presidential elections has not increased. Furthermore, a person need be neither very brave nor very rash to inject ingredients of value and relation

into this conclusion and say that voting participation has not improved while education has. To say this, of course, produces an intriguing juxtaposition of particular and general and a neat, though not a real, paradox.

The table reveals that the election of 1952 was one of the modern elections in which a relatively large per cent of voters participated. The poorest records were made

participation today. Have we been doing as much as we should to help girls develop an image of adult womanly behavior that includes the act of voting?

Some other matters of interest are to be found in the table, especially if we recall the political and social history of the period and speculate about possible cause-effect relationships. Notice, for example, how voting participation goes up immediately before

TABLE 1  
CITIZENS VOTING IN PRESIDENTIAL ELECTIONS, 1892-1952

ELECTION YEAR	CANDIDATES	NUMBER OF POTENTIAL VOTERS (In Millions)*	CITIZENS VOTING Number (In Millions)†	Per Cent
1892.....	Cleveland and Harrison	15.9	12.0	76
1896.....	McKinley and Bryan	17.4	13.8	79
1900.....	McKinley and Bryan	19.0	14.0	74
1904.....	Roosevelt and Parker	20.7	13.5	65
1908.....	Taft and Bryan	22.4	14.9	66
1912.....	Wilson and Taft	26.1	15.0	58
1916.....	Wilson and Hughes	29.8	18.5	62
1920.....	Harding and Cox	54.4	26.8	49
1924.....	Coolidge and Davis	59.6	29.1	49
1928.....	Hoover and Smith	64.7	36.8	57
1932.....	Roosevelt and Hoover	69.8	39.7	57
1936.....	Roosevelt and Landon	74.8	45.6	61
1940.....	Roosevelt and Willkie	79.9	49.8	62
1944.....	Roosevelt and Dewey	85.9	48.0	56
1948.....	Truman and Dewey	92.0	48.8	53
1952.....	Eisenhower and Stevenson	95.6	61.6	64

\* From 1892 to 1908: male citizens twenty-one years old and over, interpolated for non-census years.—Bureau of the Census, *Historical Statistics of the United States, 1789-1945*, p. 32. Washington: Government Printing Office, 1949.

From 1912 to 1916: male citizens twenty-one years old and over and white female citizens (and Negro female citizens in Kansas and Illinois) in states permitting women to vote in presidential elections.—(a) *Ibid.*; (b) Bureau of the Census, *Fourteenth Census of the United States Taken in the Year 1920*, Vol. II, *Population*, p. 810; and Vol. III, *Population*, pp. 1148, 138, 1032, 232, 1084, 108, 76, 340, 836, 576, 614, 246. Washington: Government Printing Office, 1922.

From 1920 to 1948: male and female citizens twenty-one years old and over.—Bureau of the Census, *Statistical Abstract of the United States, 1954*, p. 352. Washington: Government Printing Office, 1954.

In 1952: male and female civilian citizens twenty-one years old and over (in Georgia, citizens 18-20 years old also).—Bureau of the Census, *Current Population Reports*, Series P-25, No. 63, "Estimates of the Civilian Population of Voting Age for States, November, 1952." Washington: Government Printing Office, 1952.

† Bureau of the Census, *Statistical Abstract of the United States, 1954*, p. 343. Washington: Government Printing Office, 1954.

in 1920 and 1924. No doubt postwar cynicism and disillusionment were partly to blame, yet it is more probable that the chief cause was the giving of the vote to women and their failure to exercise their newly won right. The militant suffragettes who had marched down Main Street following the banner with the prim slogan "We Demand the Vote" may have gone to the polls and voted for Harding or Cox or Coolidge or Davis, but the majority of women apparently stayed home. There may be a clue here to how may we increase voting par-

a war and down immediately after. The size of the vote in 1896, however, could not have been influenced by the approach of the Spanish-American War, which was unforeseen by the public. On the other hand, war and peace were issues in the campaigns of 1916 ("He kept us out of war") and 1940 ("We will not participate in foreign wars . . ."). The decrease in voting participation in 1900, 1920, and 1948 may have been partly due to particular causes: to the running of the same candidates in 1900 as in 1896, to the extension of the franchise

to women in 1920, and to the seemingly certain victory of Dewey over Truman in 1948. Common causes may have been post-war disillusionment and cynicism and the letdown in civic morale that inevitably occurs with the passing of the extreme tensions and exhausting efforts of wartime. Less significant than morale factors may have been the increase in internal migration that comes after a war and that renders more than the usual number of people unable to satisfy local residence requirements for voting.

Before leaving this section of my editorial, I should like to make a few remarks on the basis of data that do not appear in the table. The per cent of persons voting in presidential elections varies considerably from state to state, with the South performing more poorly than the North. In the 1952 election, for instance, about 75 per cent of the potential voters of Illinois cast a ballot, whereas in Mississippi some 24 per cent of the potential voters went to the polls. Because our term "potential voters" includes Negro as well as white adult males or (depending on the election year) males and females, the conditions which lead to sectional differences in voting participation are obvious. These conditions and others unrelated to racial discrimination make difficult and unfair any comparison of United States voting participation with that of smaller and more homogeneous countries like Iceland and Italy, where more than 90 per cent of eligible adults have voted in recent elections.

Our eyes are fixed on presidential election returns and number of potential voters for the whole country over a period of sixty years, and our figures are no more likely to be affected by sectional restrictions on suffrage in one presidential election than in another. There is no reason to believe that male Negro citizens had freer access to registration and to the voting booth in 1900 than male and female Negro citizens had in 1952. As a matter of fact, if the Mountain States and the Pacific States are excluded from consideration, the East North Central is the region with the greatest median per

cent of loss in voting participation in 1952 as against 1900. For Michigan the loss is 24 per cent; for Ohio and Indiana the loss is 22 per cent; and for Illinois the loss is 15 per cent. Some of the Southern states lost as much or more, but South Carolina, Georgia, Florida, Mississippi, and Louisiana gained in voting participation.

#### *Voting participation and the school*

I hope that I have not misstated the point I am trying to make. I am not asserting that civic duty consists only of the behavior of voting in presidential elections, and I am not claiming that per cent of voting participation is the sole measure of the degree to which the nation possesses a sense of political responsibility. I do say that voting in presidential elections is a most important civic duty and that voting-participation data offer evidence of the tone of the nation's attitude toward our political system. But, to take the behavior as a good in itself apart from its significance as an index, I believe that voting participation ought to be better than it is and that the school ought to work to make it better. For more than a hundred years the crucial task entrusted to the school by our democratic society has been that of training up an enlightened electorate. To me the word "electorate" implies a body of citizens with the right to vote and the will to vote.

Whatever the elements were in the nineteenth-century environment and in the nineteenth-century school that caused more people to go to the polls then than now, these elements we cannot, and should not try to, reproduce today. We cannot bring back the simple America of spelling bees, husking bees, and skating parties, when the stereopticon viewer was on the marble-topped table in every parlor and when the village band played in the park on warm summer nights. Our recreations are more plentiful, more sophisticated, and more high pitched, and we will not parade behind the stuffed eagle, bearing torches and red flares, chanting slogans and cheering candidates, week in and week out from August to November. We would not want to bring



back an age when almost every citizen was a fierce and fanatic party man, and when the candidate standing on the platform of the observation car, his left hand clenching the wrought-iron rail and his right forefinger thrust toward his audience, seemed, at a distance over the heads of the crowd, little less than the Archangel Michael in a frock coat. As we look across the living-room at the close-up on the screen, we see the lines of strain on the candidate's face and the tremor of the hand that holds the notes, and we recognize him as one of ourselves. Nor would we want to bring back to the school the old subjects and the old methods. These in our times would produce a most unenlightened electorate, without the tolerance, without the breadth of knowledge, without the ability to reason logically and dispassionately, needed to meet and solve our problems. No vote at all is better than a vote cast for a false cause or a corrupt man.

We have to build up the will to vote in our own way for our own times. Since we cannot depend on excitement and glamour and ought not depend on partisan loyalties, we must guide pupils to a solid, calm, rational understanding that, in our political system, voting is of the utmost importance. We must develop within them a voting conscience that will cause them to learn all they can about the issues and the candidates and vote wisely and well. To this end, more might be done to involve our pupils in the political life of the community and the nation. In school, for instance, they might debate platforms and issues, tape-record candidates' speeches for classroom analysis, hold replica elections, and gather information on the voting participation record of the community. They might go out among the citizens and ring doorbells and urge people to vote, and on Election Day they might borrow their parents' cars and drive people to the polls.

Among high-school youth we can do much to prevent the formation of an attitude that the individual's vote does not matter. A good deal of adult apathy toward voting springs from a feeling that one vote has no bearing on the outcome of an election.

Millions of votes are cast, why should I bother to go to the polls? We must convince high-school pupils that the individual's vote is of consequence. Most American elections are close, the experts tell us, and are decided by relatively few votes. The most dramatic modern example of the way in which a presidential election may hinge on a small number of votes occurred in 1916. In that election, as you may remember, Wilson's victory over Hughes was really won by the thirteen electoral votes contributed by California, a state which went Democratic by 3,773 votes. A margin of less than four thousand votes in a crucial state decided the outcome of the election; Wilson's election eventuated in our entering World War I; our entrance into the war (in the opinion of a prominent military historian) precluded a negotiated peace and an accommodation of power; the imbalance of power on the continent precipitated World War II; World War II led to . . . ! I do not altogether subscribe to this "house that Jack built" argument, but I do think that the election of 1916 teaches a lesson about the value of the individual person's vote that our pupils should learn. It should be reinforced by examples of close elections drawn from the recent history of your own city or town.

I am writing this concluding paragraph at the end of August. The University of Chicago library has not received as yet the Bureau of Census estimate of the civilian population of voting age for November, 1956. My own rough guess is that the number of potential voters will be in the neighborhood of 101,500,000. You will find in the newspapers, from three days to a week after the election, a fairly reliable count of the total vote cast. Having the number of potential voters and the number of actual voters, you will then be able to calculate the per cent of voting participation in the 1956 election and answer for yourself the questions I have raised at the beginning of this paper. It will be interesting to see if the nation will improve on the 1952 per cent and if at last we shall match the record of the generation voting in the 1890's.

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## WHAT CAUSES TEACHER TURNOVER?

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AT THE end of the school term 1954-55, nearly one out of every four high school teachers left their positions in schools across the nation. About three thousand cases of teacher turnover were recorded for the state of Illinois alone. The cumulative effects of these withdrawals over the nation as a whole make teacher turnover one of the major educational problems of the day.

### A PROBLEM OF THE SMALL SCHOOLS

A high rate of teacher turnover, like so many other educational problems, is mainly a problem of the small school system. The Bureau of Educational Research at the University of Illinois has made studies of turnover in staffs of Illinois high schools, which show that the largest schools of the state have fairly constant rates of turnover of around 8 per cent annually. In schools with fewer than ten teachers, however, the average rate of turnover is nearly 30 per cent. Small schools vary widely around this average: a few are in the enviable position of having less than 5 per cent turnover annually, but others have annual rates of turnover as high as 60 and 70 per cent!

Imagine the educational toll in schools where two out of every three members of the teaching staff must be replaced each year. True, in these small schools this amounts only to half a dozen teachers, but to the children served by the school, most of the faces in their educational world are unfamiliar at the beginning of every school year.

Are the small schools "outgrowing" the turnover problem? In recent years there has been a substantial increase in the size of high schools across the country (in fact, if

Illinois is typical, large schools are growing at a much faster rate than small schools). Since turnover is so closely related to school size, it might be expected that growth would bring a decline in turnover rates. The Bureau checked this point in several carefully selected samples of Illinois high schools, plotting both their rates of turnover and their staff sizes for five years. While we found size increases in virtually every class of schools—small, medium, or large—turnover rates remained constant. It would seem that something other than *absolute* size is at the root of turnover. In any case, growth in absolute size has not improved the turnover situation in the smaller schools of the state.

During the past few years Illinois schools have gone through an extensive program of district reorganization intended to achieve economies in the cost of school operations, broader curriculum offerings, better facilities and school services, and less cumbersome administrative arrangements, especially in the state's smaller school systems. One might anticipate that the general upgrading of education accompanying district reorganization would have a favorable influence upon the level of turnover in the small schools, but the evidence does not bear out the argument, at least not this soon after reorganization. In a group of reorganized schools whose turnover was recorded for five years following district reorganization, the Bureau failed to find even a *trend* toward declining rates.<sup>1</sup>

<sup>1</sup> Compare the author's two reports, "The Effect of School District Reorganization upon Teacher Turnover in Illinois High Schools," April, 1954 (mimeographed), and "Supplementary Analysis:

## A SEARCH FOR CAUSES OF TURNOVER

Considering the seriousness of the turnover problem, the Bureau felt an obligation to investigate the causes of differences in rates of turnover from one school to another. In the initial research studies we sought answers to such questions as whether wealthy school districts have lower turnover than poor districts and whether schools with light pupil loads have lower turnover than schools with heavy pupil loads. Data for such variables were relatively accessible for Illinois schools, and turnover rates had been collected for most of the school systems in the state. The only important relation we have been able to establish, however, is the one already mentioned: the inverse relation between turnover and staff size. When the factors of wealth and pupil load in schools of the same size are examined, they show no relation with rates of turnover. Even the factor of the geographical location of high schools in the state cannot explain turnover rates when schools of the same size are compared. Schools with high turnover are no more common in the economically underprivileged section in southern Illinois than in the rich corn belt of central Illinois or the suburban sections near St. Louis or Chicago.

Size is the pervasive factor, but we are not sure *why* it is related to turnover. We have measured size by the number of teachers on the high-school staff, but we have also examined two other measures of school size: the number of pupils in average daily attendance and the size of the community in which the school is located. The first of these, average daily attendance, is so highly correlated with staff size that it can be ignored as a source of additional information, but the same is not true for community size. Its coefficient of correlation with staff size is .70.

We became curious to know whether

turnover rates might be more highly related to the size of the school community than to the size of the staff of the school; perhaps the inverse relation between turnover and staff size is due to the size of the town in which the school is located. Our statistical analyses proved that community size and staff size are *equally* related to turnover rates in the high schools of Illinois and that both factors contribute independently to the explanation of turnover.<sup>2</sup> That is to say, turnover is related not only to the number of teachers on the staff but to the size of the town as well. This finding, of course, does not answer the question as to why size, of the community or of the staff, is so intimately associated with the level of turnover. Indeed, we believe the answer will only be forthcoming if we can develop an adequate view of the turnover process.

## SALARY LEVEL AS A CAUSE OF TURNOVER

One question to which the Bureau has devoted especial attention is the effect of teachers' salaries upon rate of turnover in schools. Research on turnover during the last twenty years has led the education profession to believe that low salary is the *prime cause* of turnover. School officials are encouraged to draw the conclusion that increasing the school's salary level will reduce the rate of turnover among staff members. The author of an early but still outstanding investigation of teacher turnover cites salary as "one of the most important single factors" producing turnover,<sup>3</sup> and more recent investigators have reiterated this conclusion

<sup>2</sup> The peculiar nature of turnover data makes it impossible to use the standard techniques of correlation analysis, but Kendall's rank-correlation method is applicable. First-order correlations between turnover and community size and between turnover and staff size are  $-.55$  and  $-.58$ , respectively. The partial correlation between turnover and community size, holding staff size constant, is  $-.25$  and between turnover and staff size, holding community size constant, is  $-.33$ .

<sup>3</sup> Willard S. Elsbree, *Teacher Turnover in the Cities and Villages of New York State*, p. 44. Teachers College Contributions to Education, No. 300. New York: Bureau of Publications, Teachers College, Columbia University, 1928.

District Reorganization and Teacher Turnover in Small Illinois High Schools," July, 1954 (mimeographed). Urbana, Illinois: Bureau of Educational Research, University of Illinois.

time and time again. But in examining the studies on which it is based, we have become convinced that the conclusion is both an overemphasis and an oversimplification. Two separate kinds of studies are involved, each of which contains serious shortcomings in design, which lead to erroneous interpretations.

In the first kind of study, rate of teacher turnover in a number of schools is compared with the average salaries of the teachers. The typical result of these studies is shown in columns 1-3 of Table 1, in which data

TABLE 1  
PER CENT OF STAFF TURNOVER, AVERAGE  
SALARY OF ALL TEACHERS, AND AVERAGE  
STARTING SALARY OF NEW TEACHERS IN  
FOUR SMALL HIGH SCHOOLS

School	Per Cent of Turnover	Average Salary of All Teachers	Average Starting Salary of New Teachers
I.....	5	\$3,850	\$3,250
II.....	29	3,180	3,060
III.....	53	3,070	2,820
IV.....	61	3,050	3,000

from four small high schools near Champaign, Illinois, are presented. According to these figures, School I with only 5 per cent turnover pays its teachers, on the average, \$800 more than School IV with a turnover rate of 61 per cent. For all four high schools, an increase in average salary is regularly associated with a decrease in turnover.

The trouble with this clear relation is that the lower the turnover rate is in a school, the longer is the tenure of the average staff member in that school, and, as administrators well know, a teaching staff with long average tenure commands a higher salary level than a staff with short tenure. Schools with low turnover almost automatically will be paying teachers a higher average salary. Look at the figures for the same four schools in Column 4, where only the starting salaries for new teachers coming into the school are given, thereby ruling out the tenure factor. Now the difference in salary level between the

top and the bottom turnover schools is only \$250, not the \$800 we found in Column 3. Note also that School IV, with a turnover of 61 per cent, paid beginning teachers nearly as much as School II with 29 per cent turnover. The association between salary level and turnover rate is no longer strong and clear. Figures of the sort in Columns 2 and 3 of Table 1 can lead to erroneous conclusions if they are not interpreted with extreme caution.

The second kind of research supporting the belief that salary and turnover are intimately related involves asking a number of teachers why they moved to other jobs. The reasons given most frequently are regarded as the causes of turnover. As many investigators have found, by far the most common reason which teachers offer for their changes in position is "better salary" or "better position." (Researchers tend to interpret "better position" to mean "higher salary.") It seems to follow, then, that salary is the major cause of turnover and that higher salaries for teachers would reduce their school-to-school movements.

The fallacy in these studies lies, first, in accepting at face value the reasons provided by teachers for changing jobs and, second, in interpreting these reasons as the causes of turnover. Almost *any* change in a teacher's position entails some increase in salary, if for no other reason than that he has an additional year of teaching experience behind him. No wonder "higher salary" is so frequently listed by teachers. They are stating a simple fact about the nature of the teaching profession, not giving causes for their movement. "Better position" as a cause of turnover is meaningless. What teacher would give as the reason for changing jobs "worse position"? If a new position were not better in some way, a teacher would be unlikely to take it.

As a matter of fact, a few studies suggest that under some conditions teachers with the *highest salaries* are more inclined to move to other teaching positions than are teachers lower on the salary scale. In a small county in the northern Michigan



summer-resort region whose teacher turnover we studied, we discovered that the salary of teachers who left their jobs averaged \$300 higher than salaries of teachers remaining in their schools. Further, the leaving teachers were the ones who had received the largest salary increases in the preceding two years.

The reason is clear when the types of teachers composing the staffs of these small schools are examined. There are two kinds of teachers: one group consists of young men and women coming into the county for their first teaching job; the second group consists of married women (and a few men) who reside in the county permanently and who teach only to supplement the family income during the long winter months. The first group has been more recently, and better, trained than the second and consequently merits higher salaries and more rapid salary increases. Nevertheless, their training and professional ambition encourage them to move out of the county as soon as they obtain their initial years of teaching experience. The local residents, on the other hand, are not interested in making a professional career of teaching; their local ties, including their families and friends or their major occupation, are stronger than the attractions of better professional opportunities or "better salary." The difference between the two groups in their inclination to move is an expression of their basically different orientations to the job of teaching. Salary level is not a *cause* of turnover but a *symptom* of the different orientations.

Other research investigations, including some of the Bureau's studies, have not consistently supported the contention that the highly paid teachers are those most likely to leave a school system. Nor would consistent findings on this point be expected. To the majority of teachers in some kinds of schools, a substantial salary increase is the primary consideration in making their job choices, while to teachers in other schools, higher salary is incidental to other bases for decision, such as a greater opportunity

for professional advancement. Most readers of this article will know some teachers who have accepted lower salaries in order to teach in a location of their choosing. The lesson that can be drawn from the foregoing discussion is that salary is not related to turnover in a simple manner, that no blanket generalizations can be made about the relation between them.

#### NEEDED: A NEW APPROACH

As the Bureau staff has become more deeply involved in trying to explain differences in rates of turnover, we have reached the conclusion that the traditional approaches to the problem are not fruitful. The proximate cause of turnover is a kind of human behavior—usually the incumbent teacher's own decision to vacate his position—and this behavior must be explained in terms of its meaning to the individual involved.<sup>4</sup> The customary correlation studies, such as those illustrated by our initial investigations, fail to do justice to the complexities of behavior leading to turnover. When turnover rates are correlated with pupil-teacher ratios, for example, the proposition that all teachers seek to leave school systems in which the pupil load is heavy is being tested. But, as in the case of teachers' salaries, one can hardly expect pupil load to have the same meaning for all teachers—to enter in similar ways into their decisions to vacate their positions. For some teachers, the number of pupils whom they teach is wholly irrelevant; for others, pupil load may be an important factor in governing their job choices. The traditional correlation approach obscures these subtle but significant differences.

Nor are questionnaire studies, as they are customarily devised, fruitful for explaining the causes of teacher turnover. These studies typically involve some procedure for

<sup>4</sup> Behavior leading to turnover is not necessarily the incumbent's own choice; he may be discharged. In fact, were there an oversupply of teachers rather than a short supply, the proximate cause of turnover might well be centered in the behavior of the employing officers or of competitors for the incumbent's job.



identifying teachers who have left, or are intending to leave, their positions, and these teachers (or their administrators) are questioned regarding their reasons for leaving. There are variations on this procedure, but all the studies have the same shortcoming: they take a short-run view of the teachers' behavior. Statistical compilations of immediate dissatisfactions or attractions expressed by heterogeneous groups of teachers are magnified into the principal causes of turnover. Without regard for the long-run psychological context which gives momentary reasons their meaning, they appear random and superficial.

If educators are to understand the causes of turnover, they must seek the meaning

TABLE 2  
RELATION OF TURNOVER RATE TO SEX, AGE,  
AND RESIDENCE OF TEACHERS IN TWO  
ILLINOIS HIGH SCHOOLS

	Low-Turnover School	High-Turnover School
Per cent of turnover...	5	61
Per cent of all teachers who were:		
Male.....	61	37
Age 30 or over....	78	26
Local residents....	78	35

of teachers' behavior as the meaning of any human behavior is sought—in terms of the individual's aspirations and goals in life, of his view of the reality which faces him, and of his dominant interests and motivations. They must see the individual as a whole psychological being, living in the past and the future. Basic orientations provide unity to the behavior of teachers, including their job choices and even their "reasons" for making their choices, and these must be understood.

#### "TURNOVER-PRONE" TEACHERS: A SUGGESTED FRAMEWORK

In line with the preceding point of view regarding the behavior of teachers, the Bureau's recent explorations of the causes of turnover have been guided by the idea that the rate of turnover for a school is closely associated with the types of teachers

who compose the school's staff. More specifically, we are examining these two related propositions:

1. Teachers with differing orientation to their jobs are "turnover-prone" in characteristically different degrees; that is, they have different propensities for leaving their positions.
2. School systems differ in the kinds of teachers which they attract to the staff. One school will attract a kind of teacher who is highly turnover-prone, while another will attract a kind of teacher who is but slightly turnover-prone.

We first formulated these propositions as we observed the striking differences in staff composition in a number of small high schools in Champaign County and their apparent association with rates of turnover. The two schools at the extremes of turnover (Schools I and IV in Table 1, with turnover rates of 5 and 61 per cent, respectively) are illustrations. The data in Table 2 show wide differences between the staffs in their proportions of men, of older teachers, and of teachers establishing residence in the school community.<sup>5</sup> A more detailed breakdown of the data allows us to characterize the high-turnover school as one which attracts young, married girls to its staff, the majority of whom commute thirty-five miles from Champaign every day to teach. The low-turnover school, on the other hand, has a staff composed primarily of older men and unmarried women who, despite the fact that the town is within easy commuting distance of Champaign, live in the small community.

While the statistical descriptions of teachers (their age, sex, marital status, and

<sup>5</sup> Age and residence, like salary, are circularly related to turnover rate. As teachers remain longer in a school, they grow older and are inclined to move into the community if they are residing outside. However, if we simply consider statistics for teachers in their first year of employment in these two schools, the same findings hold: the low-turnover school attracted larger numbers of males, older teachers, and teachers who took up residence in the community.

so forth) do not measure their job orientations directly, we can draw some reasonable inferences on the basis of these factors. The young lady commuters in the high-turnover school, for example, probably are working wives supporting their husbands while the husbands complete their university studies. They are likely to regard teaching as a temporary occupation, in which they will engage until their husbands leave the university. If this will require several more years, they will try to find teaching positions nearer the university community in the near future. In short, one would expect these teachers to be highly turnover-prone. The older men and the unmarried women in the low-turnover school depend upon teaching as their major source of income. Because of their investment in teaching which greater age has brought, they are not likely to leave teaching for another occupation. This will be especially true for the women. Depending upon their professional ambitions and abilities, they may be inclined to move to new positions providing greater professional opportunity, but they will be less flexible in this respect than are their younger colleagues. On the whole, the staff of this school will be only minimally turnover-prone. These, of course, are post-factum interpretations and are presented here to illustrate our two propositions.

Recently we have been considering the relation between occupational mobility and teachers' job orientations (our first proposition) in more detail. Two points are worth noting in regard to the proposition. Job orientations are not necessarily constant or fixed; they may change in the course of teachers' lives. A young girl just out of college, for example, may see teaching as a way of earning a living while she enjoys her youth and as a means of meeting eligible males. If she grows older and her hopes for marriage dim, she may come to view teach-

ing in an entirely new light—as a life career. Nor are teachers with a given job orientation equally turnover-prone throughout their careers. A professionally ambitious teacher may be highly turnover-prone in his early "apprenticeship" years, but, when he reaches a position which is regarded as "tops" by the education profession, his coefficient of turnover-proneness may drop to nearly zero.

Our research studies of occupational mobility and job orientations are not sufficiently advanced to permit a concise summary of our findings. Suffice it to say that we have found important differences in patterns of mobility between married and unmarried teachers (both men and women), as well as further differences within each group according to the teachers' career goals. Male teachers who hope to enter administration, for example, are less turnover-prone, especially in their early years of teaching, than other males whose career goals lie in public school or college teaching.

Whether or not our particular approach to the explanation of teacher turnover proves fruitful, it is clear that the *whole teacher* must be brought into focus in conceiving our explanations. The kind of information about teachers which this point of view encourages us to collect, moreover, promises to provide greater understanding of the personnel who constitute the teaching profession in America. The movement of teachers out of school systems is but one problem upon which the information may be brought to bear. Eventually the point of view may lead to an understanding of the forces underlying the attraction and holding power of the profession itself. It may also help educators understand otherwise inexplicable differences between school systems in morale, administrative efficiency, and staff effectiveness in developing educational programs.

## THE ROLE OF MATHEMATICS IN CORE-PROGRAM DEVELOPMENT

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A QUESTION frequently asked concerning the core program is whether or not mathematics is "in the core." Basic to this question, of course, is an understanding of what is meant by "core." As used here, "core" refers to all or part of the program of general education. That is, core is all or part of the curriculum which is required of all students on the ground that it provides for the understandings, values, and skills needed by all for effective citizenship in a democracy. Further, core consists of broad, preplanned problem areas defined by a school staff in terms of the common personal-social needs, problems, and interests of adolescents in our society. From these problem areas, learning units are developed co-operatively in the classroom by teacher and students in terms of the particular needs, problems, and interests of the group.

In most cases the core does not comprise all the general-education program. Mathematics, for example, which is commonly regarded as having a relatively fixed sequence, is usually taught as a separate subject. From this point of view, the original question must be answered in the negative. The answer is not that simple, however.

Mathematics *is* in the core in the sense that it must be utilized by teacher and students as they come to grips with the problems that face young people today in our society. That is, mathematics is essential to carrying out many of the activities considered appropriate to the broad problem areas that provide the basic curricular structure of the core. And the mathematics teacher, as well as the teacher representing other fields of knowledge, has an opportunity in the type of core program assumed

here to play a particularly significant role at the level of preplanning; for it is at this level that he can think through with others the contribution that his field can make to meeting the common needs of adolescents. More specifically, in dealing with large, comprehensive areas which cut across conventional subject lines, he has an opportunity not only to participate in the identification of the basic problems and issues that have a bearing on a problem area but also to suggest possible learning activities, evaluative techniques, teaching materials, and how his field might be utilized in carrying out the program in the classroom.

There is every indication, however, that neither mathematics teachers nor educators primarily concerned with general education in the high school have been sensitive to the possibilities even at this level. Rather, it has been assumed that mathematics has little to contribute to a program where, in all probability, it will not be encountered in its logical systematic form. This assumption has gone virtually unchallenged. The writer believes that all the subject fields can make significant contributions to the core but, only as the problem is thoughtfully studied by all concerned, will the value of the subject fields in this framework be fully realized. This problem must be explored before any widespread reorganization of general education on the basis of the core program can be expected.

### CONTRIBUTIONS OF MATHEMATICS TO THE CORE PROGRAM

The subject of the study reported here was the possible contributions of mathe-

matics to a proposal for reorganizing general education on the basis of a core program. More specifically, the purpose of the study was to clarify the role of mathematics in general education by determining the possible contributions of mathematics to selected problem areas that provide the basic curricular structure of the core program.

In order to attack the problem of determining the contributions of mathematics to the core program, it was necessary to develop a series of problem areas appropriate for use in the core program or to accept some list already worked out. The following list of problem areas, modified from the list developed by Lurry (3), was accepted as a basis for the study:

1. Problems of Orientation to School Living
2. Problems of Self-understanding
3. Problems of Developing Values and Beliefs
4. Problems of Social Relationships in a Democracy
5. Problems of Employment and Vocation
6. Problems of Conserving Natural Resources
7. Problems of Education in American Democracy
8. Problems of Constructive Use of Leisure
9. Problems of Family Living
10. Problems of Communication
11. Problems of Democratic Government
12. Problems of Personal and Community Health
13. Problems of Economic Relationships in a Democracy
14. Problems of Critical Thinking
15. Problems of Achieving World Peace in the Atomic Age
16. Problems of Intercultural Relations

The original plan of the writer was to develop the contributions of mathematics to each of the problem areas defined in terms of purposes and a broad statement of scope. It was discovered, however, that the contributions of mathematics could not be determined apart from the activities in which students might engage as they come to grips with the problems involved in a given problem area. Thus the problem of the study was twofold: first, to develop a series of activities appropriate to the problem areas accepted as a basis for this study;

second, to determine the possible contributions of mathematics to these activities.

The development of activities appropriate to the sixteen problem areas was a co-operative venture. For this part of the study the writer collaborated with two other investigators concerned with similar problems. In developing the activities appropriate to the problem areas, the following technique was used: (1) survey of the literature bearing on the problem area, (2) definition of scope and objectives, (3) construction of possible activities on the basis of a set of criteria developed by the group, (4) submission of possible activities to teachers at the Ohio State University School for criticisms and suggestions. The contributions of mathematics to the core program were then defined in terms of the mathematical concept essential to carrying out the possible activities.

A detailed analysis of the core activities disclosed that mathematical concepts were essential to carrying out activities in each of the sixteen problem areas. At this point the writer would emphasize that the term "essential" is not used in an absolute sense. The concepts which define the contributions of mathematics to the core activities represent the judgment of one person and should be interpreted in that light. It should be made clear, however, that every effort was made to avoid "dragging in" concepts. Each activity in each of the problem areas was carefully analyzed, and only those concepts which were considered essential to carrying out the activities were included in the list of concepts.

The sample analysis shown on page 302 is presented as illustrative of the technique used in determining the mathematical concepts that were considered essential to carrying out the activities.

A preliminary analysis of the activities yielded forty concepts basic to carrying them out. This number increased to fifty-three as the activities were re-examined and the concepts refined. These fifty-three concepts categorized under six major concepts are presented in Table 1.

Among the concepts listed under "Number," the concepts of whole number, number system, fraction, approximate number, and decimal showed a much higher frequency than did the concepts of exact number and denominate number. The concept of directed number was seldom used. The frequency of the concept of significant figures

relationship." The concepts of approximate relationship, variable, constant, independent variable, dependent variable, and graphical representation were judged essential to carrying out a number of activities. Other concepts under the heading of "Relationship" were less often essential. All the concepts listed under "Proof" occurred with

#### SAMPLE OF THE TECHNIQUE FOR DETERMINING THE MATHEMATICAL CONCEPTS ESSENTIAL TO THE CORE ACTIVITIES

##### ACTIVITY

Find out in how many families in the community both parents are working. What is the effect upon the family life?

##### STEPS IN CARRYING OUT THE ACTIVITY

1. Devise some plan for obtaining a representative sample, for example, checking with the occupants of every fifth house. [Sample collections of data are said to be representative if they are selected so that each factor which is likely to influence the result is represented and in approximately the same proportion as it would be in a complete set of data.]

2. Have each student assume the responsibility for gathering data from a certain number of families. [Numbers which result from counting the objects in a group are called "exact numbers."]

3. Tabulate data gathered by everyone participating in the survey.

4. Present findings in a clear, concise form. [A per cent is a decimal fraction expressed in hundredths.]

[An understanding of the concepts of whole number and number system is basic to the quantitative aspects of any activity.]

Concept  
*Representative-  
ness*

*Comparison  
(Ratio)  
Fraction*

*Counting  
Symbolism  
Exact number*

*Tabulation  
Addition  
Symbolism*

*Comparison  
(Ratio expressed  
as a percent-  
age)  
Decimal  
Fraction  
Rounding off  
Significant fig-  
ures*

*Whole number  
Number system  
Symbolism*

was four times as great as that of estimating, the concept of next highest frequency listed under "Measurement." The concepts of direct measurement, standard unit, approximation, possible error, relative error, accuracy, and precision were used about the same number of times. The concepts of scale-drawing and indirect measurement occurred infrequently. Tabulation of data was the most frequently used concept in "Re-

about the same frequency. Among the concepts listed under "Operation," subtraction, division, rounding off, and comparison were extensively used. Counting and addition were frequently essential. Multiplication was seldom used. The concept of mathematical "Symbolism" was basic to more than two-thirds of the activities in which mathematical concepts were essential.

In all, mathematical concepts were es-



essential to 271 of the 1,262 activities in the 16 problem areas. The problem areas most dependent upon mathematical concepts were "Social Relationships in a Democracy," "Critical Thinking," "Economic Relationships in a Democracy," and "Personal and Community Health." Problem areas in which the concepts were essential to relatively few activities were "Self-understanding," "Constructive Use of Leisure," "Democratic Government," "Achieving Peace," and "Communication." The re-

carrying out the core activities provide adequate content for general education? In order to throw some light on the problem of determining the adequacy of the fifty-three concepts for general education, it was necessary to make a study of several formulations of the mathematics necessary for all and to compare them with the findings of this study. The three formulations selected for study are reported in *The Place of Mathematics in Secondary Education* (4), *Mathematics in General Education* (2), and

TABLE 1  
MATHEMATICAL CONCEPTS ESSENTIAL TO CARRYING OUT  
THE CORE ACTIVITIES

Number	Relationship	Proof
1. Whole number	1. Tabulation of data	1. Representativeness
2. Number system	2. Variable	2. Assumption
3. Fraction	3. Constant	3. Relevance
4. Approximate number	4. Dependent variable	4. Hypothesis
5. Decimal	5. Independent variable	5. Reliability
6. Exact number	6. Graphical representation	6. Definition
7. Denominate number	7. Approximate relationship	7. Undefined term
8. Directed number	8. Trend	8. Deduction
	9. Extrapolation	9. Induction
Measurement	10. Interpolation	
1. Significant figures	11. Mean	Operation
2. Estimating	12. Functional relationship	1. Comparison
3. Standard unit	13. Mode	2. Division
4. Approximation	14. Median	3. Rounding off
5. Possible error	15. Formula	4. Subtraction
6. Relative error	16. Correlation	5. Counting
7. Accuracy	17. Normal frequency distribution	6. Addition
8. Precision		7. Multiplication
9. Direct measurement		
10. Scale-drawing		Symbolism
11. Indirect measurement		1. Mathematical symbolism

maining problem areas called for these concepts in carrying out a moderate number of activities. On the basis of the foregoing, it seemed reasonable to conclude that *mathematics makes a significant contribution to general education organized on the basis of a core program.*

#### MATHEMATICS ESSENTIAL FOR GENERAL EDUCATION

At this point one might well raise a question concerning the adequacy of the mathematics essential to carrying out the core activities. In terms of the study reported here, the question is: Do the fifty-three mathematical concepts essential to

the second report of the Commission on Post-war Plans of the National Council of Teachers of Mathematics (1). It was assumed for purposes of exploring this problem that these formulations, which are the major curricular proposals in mathematics education, are authoritative sources for determining the adequacy of mathematical content for general education. Following are brief descriptions of the three formulations.

In 1940 the Joint Commission of the Mathematical Association of America and the National Council of Teachers of Mathematics made a study of the mathematics needed by all persons and concluded that, in the activities and experiences of everyday

life, the average citizen of today needs considerable mathematical knowledge. This conclusion was reached on the basis of a study of the contributions of mathematics to the objectives of education. In the opinion of the writer, this approach, time-honored though it is, seems not too appropriate for determining the mathematics needed by the average citizen as he goes about the business of everyday living. Rather, it seems to be an approach which allows one to justify the inclusion of a great body of subject matter, for even the most traditional subject matter is held to be "needed" in that it contributes to the attainment of the objectives of education. The commission recommended that a mathematics program be built substantially around seven major fields: number and computation, geometric form and space perception, graphical representation, elementary analysis, logical thinking, relational thinking, and symbolic representation and thinking. In describing the seven fields, the commission subdivided them into categories such as the following: basic concepts, principles, and terms; fundamental processes; fundamental relations; skills and techniques; and applications.

*Mathematics in General Education* is the Report of the Committee on the Function of Mathematics in General Education of the Commission on Secondary School Curriculum. This commission, established by the Progressive Education Association in 1932, was charged with the task of examining the fundamental problems of general education at the secondary level. A study of adolescents was undertaken, and committees representing various areas of instruction in the secondary school were established, the committees assuming the responsibility for exploring the contributions of their particular field to meeting the needs of young people in our society. Actually, the commission did not move beyond the subject-matter approach to general education, but it is significant that a study of the needs of adolescents in a democracy was basic to the work of this group. The com-

mittee established in the area of mathematics took the position that the major role of this area in developing the personal characteristics essential to democratic living lies in the contribution it can make to growth in the abilities involved in reflective thinking. In the opinion of the committee, the study of mathematics is of educational value because mathematics can throw the problem-solving process into sharp relief. The report of this committee focuses on seven major concepts, with special reference to their mathematical aspects: formulation and solution, data, approximation, function, operation, proof, and symbolism.

Perhaps the most well-known and widely accepted of the formulations of the mathematics needed by all is that of the Commission on Post-war Plans. In its final report the commission recommended a program for developing "functional competence" in mathematics for the ordinary affairs of life as a part of general education appropriate to the major fraction of the high-school population. The essentials for functional competence were put in a check list of twenty-nine items. (For purposes of comparison, the writer grouped the twenty-nine items under five headings: number and operation, measurement and geometric form, proof, relationship, and symbolism.) Functional competence in mathematics was defined on the basis of an analysis of six hundred jobs in the armed forces, the assumption being that the mathematics for minimum army needs, with only slight modification, should be part of the general education of all. This assumption is subject to criticism, yet one must concede that the technique yields valuable data for attacking the problem.

A comparison of the findings of the writer's study with the proposals cited showed that the structure of major concepts derived from an analysis of the core activities was basically the same as that of the three formulations. A more detailed comparison showed that, in general, the fifty-three concepts compared favorably with the specific proposals of the three

committees. Thus it was concluded that *the mathematical concepts derived in this study are adequate content for general education.*

Basic to the discussion of adequacy is the assumption that the concepts derived in this study can be learned in the core framework. Admittedly, this assumption is open to question. Traditionally, of course, the only logic recognized for the teaching of mathematics derives from the internal structural order and organization of the subject, the order which the specialist recognizes as mathematically logical. Subject matter is presented to the learner on the assumption that he can take over, without change, the form worked out by experts after they have developed the insight necessary to build up the systematic structure. The logic of the core program derives from the pursuit of activities appropriate to broad problems of living. It is assumed that logical structure exists for the learner only as it emerges from experience. In short, the traditionally organized subject matter begins with the systematic structure, while the core terminates with the systematic structure.

The fundamental question here is whether mathematics can be learned in a framework where in all probability it will not be encountered in its logical form. For the most part, studies concerned with this problem have been confined to the elementary-school level. The few carried out at the secondary level do not assume the type of core program under consideration here.

It may well be that the problem is not so critical as one might think at the secondary-school level. How vital is logical sequence in the mathematics essential for general education if students have already acquired a working knowledge of the mathematics of the elementary school? How acute is the problem of developing the mathematical concepts and abilities on the spot as they are needed? Does the flexibility of the core program make an appreciable difference in the scope or recurrence of the mathematics essential for general education? If mathematics is not required outside the core, does this mean that a disproportionate

amount of core time will be spent on that field? Such questions must be considered by anyone who wishes to determine the effectiveness with which mathematics can be learned in the core. In the opinion of the writer, confident answers to such questions cannot be given without further experimentation in the classroom.

#### SUMMARY AND RECOMMENDATIONS

A brief description of a study of the contributions of mathematics to the core program has now been completed. Throughout the discussion the writer has assumed that the need for reorganizing general education has been sufficiently well established and that the core program is a promising proposal for such reorganization.

One of the major blocks to the development of the core program in the high school is the confusion as to the role of the subject fields in such development. When the well-established, logically organized, subject-matter pattern of general education is replaced by the core program, which deals with the common needs, problems, and interests of youth without regard to subject-matter lines, many teachers feel insecure concerning the particular contribution of their field to this development and may even oppose the program. The writer has taken the position that problems dealt with in the core *do* cut across traditional subject-matter lines and that the subject fields have much to offer to the study of the common problems of youth in our society. The following statement of recommendations is designed to summarize the article and point up the necessity for further research.

1. *Experimentation with the hypothesis of this study should be undertaken in an actual core situation.* There is a need for concrete evidence concerning the operation of the general theory advocated in this study, namely, that mathematics makes a significant contribution to general education organized on the basis of a core program. Considerable insight into the role of mathematics in general education may be gained by suggesting the possible contributions of

mathematics to the activities appropriate to the broad problem areas which provide the basic curricular structure of the core. This procedure, however, is fraught with several difficulties. In the first place, since the curriculum for any school would vary from that of any other, it is not possible to prescribe the activities which might be included in the core. Furthermore, such a prescription would tend to eliminate or stifle teacher-student planning in the classroom. In the second place, at this level of abstraction, it is not possible to do more than suggest the potential contributions of mathematics to the core activities. The study reported here has merely scratched the surface. The problem must be attacked on the level of experimentation in an actual classroom situation.

2. *Experimentation related to the effectiveness with which mathematics can be learned in the core framework should be carried on.* There is little question concerning the potentialities of the core program for providing opportunities for developing mathematical concepts, principles, and processes. However, there remains the question of the effectiveness with which mathematics can be learned in the core. For the most part, studies concerned with this problem have been confined to the elementary-school level. In the opinion of the writer, on the basis of the experimental evidence available at the present time, a confident answer to this question cannot be given. Further experimentation in the classroom is needed.

3. *There should be exploration of the implications of this study for the preparation of core teachers.* In the writer's opinion, special preparation must be given core teachers if the core program is to fulfil its promise as a significant proposal for the reorganization of general education. The study reported here was based on the assumption that the broad preplanned areas of living in which adolescents usually have problems, rather than organized fields of knowledge, provide the basic curricular structure of the general-education program. Materials from all fields are utilized as they are needed.

This suggests that the core teacher must have a wide background of experience. Examination of the mathematical concepts derived in this study may give some clue as to the mathematical experiences that should be part of the core teacher's preparation.

4. *The implications of this study for the preparation of mathematics teachers to participate in core-program development should be explored.* Problem areas, as defined here, are set up by the faculty of a school in terms of the psychological and societal needs, problems, and interests of their students. One of the chief advantages of this type of preplanning is that the teacher in a special-interest area has an opportunity to think through, with those who teach in the core, his contributions to the core activities and to assist in their development if this type of preplanning is done. This emphasis on preplanning has implications for the preparation of the mathematics teacher. If he is to participate effectively in core-program development, competency in the teaching of mathematics is not sufficient. He must also understand the philosophy of education and the psychology of learning underlying the core and be able to implement these through the field of mathematics.

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## A RATIONALE OF OCCUPATIONAL ORIENTATION

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THE IMPORTANCE of providing occupational-orientation experiences in the school program, particularly at the secondary-school level, has been recognized in various pronouncements on the objectives and functions of education. Representative statements probably best known to most of us include the *Cardinal Principles of Secondary Education* (2), the *Social-economic Goals* report (3), and the Educational Policies Commission's reports, *The Purposes of Education in American Democracy* (5) and *Education for All American Youth* (4). To the significance that these reports place on occupationally educative experiences can be added the emphasis given vocational guidance both in the literature of education and in many school programs during the past quarter of a century.

During this period, teachers and guidance specialists and various technicians have been active in developing methods and materials for occupational orientation. Their common purposes have been to help students understand and appreciate the significance of work and the importance of occupational selection and competency and to assist students in studying and analyzing occupations in relation to their own interests and talents. For teachers who may wish to be better informed on the nature and uses of various vocational-guidance materials, either *Occupational Information: Its Nature and Use* by Baer and Roeber (1) or Shartle's *Occupational Information* (6) may serve as an excellent starting point.

These introductory remarks may suggest that a satisfactory state of affairs has been attained. It is a safe guess, however, that considerably less than a majority of our

schools today attempt vocational orientation which can be characterized as substantial and that relatively few of these schools are able to boast of a comprehensive, co-ordinated program of activities. Any school in operation will provide some limited, incidental instruction and guidance relating to occupations. And, of course, instruction in commerce, industrial arts, home economics, and a few other subject areas at the secondary-school level contributes to the job knowledge of students who enrol in these courses. Thus it would be difficult to find a program of general education in our public schools that does not in some fashion contribute to an understanding of the world of work. It would be equally difficult, however, to refute a contention that the public school with a systematic, broad, and continuing program of activities and experiences designed to accomplish objectives of vocational orientation is somewhat atypical.

This is not to say that, in the majority of our schools, no one has undertaken to do anything about the provision of occupationally educative experiences. It is quite likely that most communities have one or more teachers who make extensive use of vocational information within a given activity or subject area. What, then, would account for the absence of occupational-orientation programs in many public school systems today? Or to rephrase the question, how can the school which does not now provide adequate occupational orientation undertake to improve its work in relation to this important responsibility? The partial answer offered here is that progress in this respect will be best demonstrated by the school in which a necessary foundation or



rationale is constructed and laid down as a base for the school's vocational-guidance efforts now and in the future.

A rationale of occupational orientation suitable to any one school system will be unique in some manner and degree; there is no single pattern or prescription which can be tailored to fit any and all situations. Some components which may be included in most formulations are (1) identification of concrete objectives which are meaningful to teachers and to which they are committed, (2) attainment of general understanding and working agreement among teachers on principal concepts and assumptions underlying the projected program, (3) consideration of the occupational experiences and attitudes of teachers and recognition of the significance of such personal factors, and (4) development of working principles and policies.

The foregoing should not be viewed as of consequence only in progressive steps or developmental stages. They are building materials, so to speak, with which a foundation can be constructed for a program of occupational orientation. None of these elements can safely be regarded as inconsequential or be relegated to the limbo of "later consideration."

#### IDENTIFICATION OF OBJECTIVES

Well-defined aims are vital and constitute a notable accomplishment in any co-operative undertaking. Objectives that will guide and sustain action must be set out. To serve as prime movers, these purposes must be realistic and meaningful in relation to the conditions and limitations of the particular school situation. More than that, they must be so cast as to arouse and challenge teachers, impelling them to actions which demonstrate that their commitment is much more positive, deliberate, and substantive than mere acceptance.

To attempt a delineation here of a full charter of objectives for any and all school systems would be a contradiction. The following statements illustrate, in a condensed and somewhat sterile form, some of

the purposes which teachers in a given school might agree upon in the process of creating a foundation for occupational orientation in that community:

1. Help each student understand and appreciate the need for engaging in a suitable, satisfying, and useful vocation.

2. Help each student recognize the value of employing intelligence and careful planning in selection of, and preparation for, his life's work.

3. Help each student become well informed about the scope and complexity of the world of work.

4. Assist each student in becoming acquainted with methods of studying and exploring the world of work.

5. Help each student become acquainted with methods of investigating, sizing up, and comparing various occupations.

6. Assist each student in identifying and exploring his vocational interests and aptitudes.

7. Provide each student with opportunities to investigate occupations of interest to him and see that he has access to resources for such investigations.

8. Help each student identify and study current trends, problems, and opportunities in employment.

9. Assist each student in becoming acquainted with training provisions, employment services, labor legislation, employment practices, etc.

10. Encourage each student to look upon vocational planning as a lifelong process.

11. Challenge each student to gain the maximum from learning experiences growing out of implementation of these objectives.

#### UNDERLYING ASSUMPTIONS

An attempt to arrive at purposes will involve a second component, or element, of a rationale: the assumptions and concepts supporting or undergirding the whole program of occupational orientation. What are the significant assumptions?

Again, it is not possible to set out definitively every basic concept and assumption appropriate to the functions and scope, as well as the resources and limitations, of occupationally conscious education in a given community. Some of the more significant premises which would seem to be universal are:

1. Occupational orientation is a function of general education and is not properly confined to specialized vocational fields.

2. Orientation to work is a function of education and is not properly conceived to be solely a guidance responsibility.

3. Experience in occupational study and planning should be broad, continuous, and developmental.

4. Occupational experiences should permeate much of the educational program rather than be confined to a limited area or period of time.

5. Occupational orientation involves learning processes and experiences which may be initiated and directed by any competent teacher; it is not properly viewed as the highly specialized province of a few specialists with great technical training.

6. Experiences in occupational orientation should begin early in the child's school career, gradually developing in step with his increasing maturity, capacities, interests, talents, and needs.

When efforts to plan and maintain an occupational-orientation program go awry or are stillborn, there has been, as often as not, a failure to attain general understanding and working agreement among the personnel involved—desirably, all teachers—on basic beliefs and theories such as those set out above. In other instances the lack of success may stem from failure to recognize, and deal adequately with, still another component of a rationale of occupational orientation, that is, various personal factors, such as teachers' attitudes, morale, occupational experiences, and personal philosophies.

#### ATTITUDES AND EXPERIENCES OF TEACHERS

Teachers are the "jewel bearings" around which the whole system of instructional processes and teaching activities turns. Any curriculum planning must recognize the teacher as a key factor, an essential link, in the chain from conception to inception. To secure full agreement among teachers on fundamentals of occupational orientation is one thing. It is quite another matter, however, to account for various personal

factors which may be influential in the behaviors and contributions of this personnel.

Observation or study of any representative group of public school teachers will reveal significant differences in outlook and morale. Oftentimes these differences tend to persist in the face of efforts to reconcile or reduce them. Today, a good portion of teachers have had occupational experience at various kinds of work prior to, during, or following their college preparation for teaching, while many educational workers have not had the occasion or the opportunity to work at any occupation other than teaching.

The point is not that teachers, individually or collectively, should be criticized for their attitudes and views or that all uniqueness or variation should be considered undesirable. However, it should be recognized that these differences do exist and are often significant. Recently, as instructor of a graduate course in vocational guidance, the writer found evidence of considerable variation in the views and attitudes of eighteen classroom teachers, guidance specialists, principals, and superintendents enrolled in the course. After sensing on several occasions that fundamental differences of outlook existed within the group, the instructor prepared twenty-five statements of opinion or belief about the world of work, the attitude of adult workers, and the possibilities of orientation for work. The statements were presented orally at a meeting of the class, and every student was invited to react to each statement. There was lively discussion and controversy on nearly every one of the twenty-five. Some discussion, of course, concerned interpretations or definitions relating to the wording or construction of the statements.

Several weeks after this activity, copies of the statements were distributed in a session of the class, and members were asked to react by writing responses as follows: "Strongly agree," "Agree," "Uncertain," "Disagree," "Strongly disagree." If none of these responses described their reactions to a particular statement, they ignored the

item. Analysis of the written, anonymous responses showed that there was substantial agreement on fifteen of the statements. With respect to the following statements, the group was almost equally divided between those who agreed and those who disagreed:

Most job-seekers today are looking for the easiest way possible to make a living.

The typical high-school graduate today thinks he deserves employment in a well-paid occupation.

Most young people today expect to have a career in one of the professions.

To expect intelligent and energetic vocational planning by the typical high-school student today is not realistic.

When it is remembered that these experienced and capable educational workers had previously discussed each of the items in a group session, their reactions may be seen as a case in point supporting the position that personal attitudes, points of view, and philosophies are not easily modified. The teacher who believes that it is not realistic to expect enthusiastic and intelligent job-planning by the typical high-school student, or who feels that most job-seekers today are looking for the easiest way possible to make a living, will surely reveal such attitudes in his work, in spite of his best efforts. In developing a meaningful and defensible rationale of occupational orientation, therefore, recognition must be accorded the weight and influence, the pervasiveness, of personal beliefs and outlook. Efforts must be exerted to persuade and help all educational workers who are to be involved in the orientation program to examine their views as a first step in modifying them, or at least minimizing them in some compensatory way, when this appears desirable.

#### DEVELOPMENT OF WORKING PRINCIPLES

The existence of contradictory, indefensible, or negative attitudes and beliefs may be revealed when work is under way on developing the fourth ingredient of our rationale: working principles and policies. The discussion of objectives and concepts

earlier in this paper may have suggested some possible policies and working principles. The following statements of principles and policies are illustrative. It may be seen that some of these are general or comprehensive to a degree that they could be viewed as basic concepts as well as working principles.

1. Selection of specific techniques, materials, and devices of job orientation must wait upon development of aims of a school's occupational-orientation work.

2. Needs of the school community must be studied in formulating objectives of vocational-conscious general education.

3. Maximum teacher involvement in all stages of studying and planning an occupational-orientation program will greatly enhance prospects of success.

4. The development of occupational-orientation activities may involve or necessitate an in-service education program for teachers in the school.

5. The policies, methods, and materials selected for use in occupational-orientation efforts must be validated and defended chiefly in relation to the ends sought.

6. Emphasis in planning and maintaining the program should be placed on working procedures and policies that emphasize system, coordination, and continuity and that avoid dependence on personalities or commercially prepared tools.

7. A problem-method approach to the development of a program of vocational information (studying the situation, planning and experimentation, evaluation, and modification) will usually be superior to a compare-and-copy approach, in which wholesale duplication of another school's work is attempted.

8. Unless the defined objectives are extremely narrow, no one device, technique, or activity will suffice to orient students to the vast world of work.

Policies and working principles such as these should be known and understood by all teachers concerned with the school's activities in orienting students to work. This concept in itself may be a useful working principle which should be recognized in the policies and procedures developed in any given school community. The importance

of working principles and policies in providing direction should not be minimized. A not uncommon incident or two may illustrate how the absence of defensible working principles that are understood by all can lead to shortsighted or misdirected effort.

On more than one occasion, a teacher has remarked that an occupational-information program is to be developed in his school and in virtually the same breath has asked, "Could you give me a list of the library materials we ought to have in starting our job-information service?" On other occasions, teachers have indicated that the success and continuation of proposed job guidance in their schools seem assured; for the local postmaster has agreed to talk on federal civil service at an all-school assembly next spring, or perhaps the board of education has tentatively agreed to budget \$25.00 for rental of films, or the principal may have appointed the home-economics teacher to be officially concerned with occupational orientation (and said teacher is now busily engaged in planning a follow-up study of all graduates during the past three years who completed one or more home-economics courses while in high school).

The presence of well-defined principles and policies will help place such activities in a proper perspective in a program of orientation. The fact that the definition of feasible policies and principles necessitates a thoroughgoing understanding of the three components discussed earlier lends support to the plea that careful and critical study be made of each.

#### A FINAL COMMENT

These brief remarks have introduced four facets of a rationale of occupational orienta-

tion: objectives, basic assumptions, personal factors, and working principles. This description is not definitive since other components of a rationale might be identified. The task of developing a program of work orientation in a school or, for that matter, planning any curriculum project is in part, and initially, a problem of constructing a rationale which is strong enough to support the program resting upon it. Perhaps such a formulation may include elements which have not been set out here. However, failure to devote careful attention to the four components described above will result in a foundation that will not bear the weight of a vigorous occupational-orientation program.

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## THE EFFECT OF COUNSELING ON A GROUP OF UNDER-ACHIEVERS

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HOW WELL pupils make use of their learning capacity has always been a concern of educators. However, in our time the increasing complexity of our civilization and the tensions arising between democratic and totalitarian ways of life have brought the problem into greater prominence than ever before. Faced with disturbing shortages of trained personnel now and with even more serious shortages looming in the foreseeable future, we realize that the most effective use of our human intellectual resources must become a major educational objective.

The matter has not been overlooked in recent educational research. Over the past several decades the search for factors related to scholastic achievement, or the lack of it, has revealed that mental ability is by no means the exclusive determinant of academic success. A number of guidance and counseling techniques have been tested for their effectiveness in promoting academic attainment consistent with native ability. By now it is fairly clear that both the cause and the alleviation of scholastic under-achievement involve complex variables and must be dealt with accordingly.

Although there is evidence that the under-achievement problem is a long-range one, most of the research has dealt with groups of students of the senior high school or the college level. Furthermore, the subjects in many instances have been students with failing or near-failing records. The study here reported is an attempt to attack the problem as it existed among a group of junior high school pupils who were not necessarily failing any school work.

### THE PROBLEM AND THE PROCEDURE

Specifically, the purpose of this study was to assess the effects of a program of individual counseling on the academic accomplishment of under-achieving pupils in Grade VIII of the Gordon Junior High School in Coatesville, Pennsylvania. In such an evaluation, certain assumptions had to be made. First of all, the postulate of variation among individuals in capacity for scholastic achievement was accepted. Also, the utility of a group test of general intelligence in differentiating individual levels of mental ability was accepted. A third assumption was that a standardized achievement battery and school marks would each give some measure of the actual level of achievement.

The project was carried on as a controlled experiment during the school year 1954-55, using two equivalent groups of under-achieving pupils. Early in the school year, all the 267 pupils in Grade VIII were given a standardized achievement battery and a group test of mental ability. From the results of these tests the achievement age and the mental age of each pupil were determined. For the purposes of this study the disparity in months between mental age and achievement age was taken as a measure of under-achievement. The mean difference between these measures was 13.48 months in favor of mental age; only pupils under-achieving by more than this amount were considered for inclusion in the equivalent groups of under-achievers. Chronological age, sex, intelligence quotient, and number of months of under-achievement were used as matching variables to establish



a control and an experimental group of under-achievers. In all, 40 pairs of pupils (20 each of boys and girls) met the matching criteria. Transfers during the experimental period reduced the number of pairs to 38.

With the experimental group a program of individual counseling for academic success was undertaken. Three interviews were rather definitely planned in advance, and additional interviews with the pupils and/or their parents were arranged as the experiment progressed. For the first interview an "under-achievement card" was prepared for each pupil in the experimental group, showing graphically his standard scores for ability and achievement, as well as the number of months of disparity in achievement and mental ages. Since all pupils indicated a desire to reduce or eliminate this "under-achievement gap," the next step in the conference was the completion of a pupil data sheet, the purpose of which was to elicit information about the home and family situation, school history, educational and vocational plans, study habits, and several other categories of data. This device served as (1) a means of collecting a fund of objective information about the pupil, (2) a stimulus for expression of attitudes and feelings in these and other areas, and (3) a point of departure for the pupil in his search for possible causes of his under-achievement. Typically, the first and later interviews involved making some notes on a "pupil plan sheet." In one section the pupil set down what he felt were possible causes of his relatively poor achievement; in another, he specified just what steps he thought he should take to alleviate the condition. After the conclusion of each interview the investigator summarized the salient points of the conference on an interview record form.

With the exception of the opening stages of the first contact, the interviewing procedure in all contacts was largely nonprescriptive. No effort was made to impose the counselor's suggestions in the relatively few instances where suggestions were made. In the great majority of cases the pupils themselves were able to work out plausible

courses of action. In later interviews some counselees identified other possible causes of their under-achievement. Some evaluation of his success in carrying out previous plans and of their effectiveness was usually made by the pupil. In the light of this evaluation, other plans were made, earlier ones were modified, and some were dropped as ineffective. A "pupil plan sheet" and an interview record were completed for each conference. Contact was made with one or both of the parents of sixteen of the forty members of the experimental group. Most were initiated by the parents in response to a letter describing the pupil's problem and the general procedure being followed in trying to alleviate it.

Near the end of the school year, another form of the achievement battery was administered to the whole eighth grade. The results of this test, together with school marks and certain trait ratings made routinely by all major-subject teachers, were the bases on which experimental and control groups were compared at the end of the experimental period.

#### RESULTS

Related most directly to the problem as stated were the comparisons drawn between the two groups as to achievement age at final testing and as to school marks before and during the experimental period. Table 1 is a summary of the data with respect to achievement age for control and experimental groups. Although the mean achievement age for the experimental group at final testing exceeded by more than three months the corresponding measure for the control group, the *t* ratio of 1.66 indicates a probability of somewhat more than .10 that this difference could have occurred by chance. In short, the program of counseling did not bring about a statistically significant improvement in achievement as measured by a standardized test battery.

School marks were a second basis on which the two groups were compared. In the school where this study was made, the schedule included four major subjects. Quality-point values were assigned to marks

in these subjects on the basis of  $A=4$ ,  $B=3$ ,  $C=2$ ,  $D=1$ , and  $F=0$ . Thus the maximum number of quality points for major subjects in each report period was 16.

Table 2 summarizes the findings on school marks. Since the interviewing program did not begin until after the close of the first report period, the relatively small difference in mean number of quality points

ing began, the experimental group excelled by a significant (.05 or smaller probability level) margin in three comparisons and closely approached a significant margin in a fourth. The counseling program appeared to have the effect of improving the level of school marks of members of the experimental group. The margin of superiority may be illustrated by noting that the "aver-

TABLE 1  
COMPARISON OF CONTROL AND EXPERIMENTAL GROUPS WITH RESPECT TO  
ACHIEVEMENT AGE AT INITIAL AND FINAL TESTING

MEASURE	INITIAL TESTING			FINAL TESTING		
	Control Group	Experimental Group	t Ratio for Difference	Control Group	Experimental Group	t Ratio for Difference
Range in months. . .	126-189	115-185	.....	125-196	125-199	.....
Mean in months. . .	153.34	153.86	.16	164.06	167.42	1.66
Standard deviation in months. . . . .	14.36	14.08	.12	17.34	17.40	.03

TABLE 2  
COMPARISON OF CONTROL AND EXPERIMENTAL GROUPS WITH RESPECT TO  
SCHOOL MARKS BEFORE AND DURING EXPERIMENTAL PERIOD

TIME INTERVAL	MEAN NUMBER QUALITY POINTS		t RATIO FOR DIFFERENCE
	Control Group	Experimental Group	
First report period. . . . .	8.39	8.61	.58
Second report period. . . . .	8.29	9.10	2.02
Third report period. . . . .	8.32	9.08	1.81
Fourth report period. . . . .	8.32	9.42	2.56
Fifth report period. . . . .	8.18	9.08	1.73
Sixth report period. . . . .	8.50	9.66	2.32
Last five report periods. . . . .	41.75	46.75	2.51

earned by control and experimental groups in that interval was not unexpected. In the remaining five report periods, during which counseling was being carried on with the experimental group, some superiority for that group appeared consistently. (For the 37 degrees of freedom represented by the 38 pairs, a  $t$  ratio of 2.03 indicates statistical significance at the .05 level; of 2.43, at the .02 level; of 2.72, at the .01 level.) In six comparisons of marks earned after counsel-

age" member of the experimental group in each of the last five report periods received one major-subject mark which was one step higher on the scale than the corresponding mark for his opposite number in the control group.

In addition to the comparisons in achievement described above, ratings for pupils in the control and the experimental groups on certain character traits were also studied. These ratings were made twice during the

year by each major-subject teacher for all pupils as part of the established reporting procedure. Two traits, "Interest" and "Industry," appeared rather directly related to academic performance. Four others, including "Responsibility," "Concern for Others," "Social Maturity," and "Emotional Stability," were generally interpreted as pertaining mainly to nonacademic activities. The first rating was made before much interviewing had been done; the second, approximately at the middle of the experimental period. No significant differences between control and experimental groups were found in the first set of ratings on any trait. On the second set of ratings, however, ratings on "Interest" for the experimental group were superior to those for the control group by a margin significant at the .02 level. Also, the second set of ratings on "Industry" tended to favor the experimental group, but the difference was not statistically significant, the probability of chance occurrence of such a difference being somewhat less than .10 but greater than .05. Differences on the remaining four traits were uniformly small and insignificant.

#### IMPLICATIONS

Since the present study was limited in scope to a single grade of one junior high school, the comments that follow should be considered as examples of the kinds of insights to be gained from projects such as this and not necessarily as statements of conclusions of general significance.

In the analysis of the results of the initial testing program, it was found that the degree of under-achievement tended to be greater among those in the upper half of the distribution of general ability. Among those above the average in intelligence, 60.3 per cent lagged more than the average of the total group in achievement age, while the corresponding figure for those below the mean in intelligence was 34.4 per cent. Although the factors in pupil backgrounds responsible for the situation were not specifically identified in this study, the data rather clearly point to the desirability of increased

attention to the fostering of optimum achievement among these more able pupils.

In the course of the counseling interviews, several more or less subjective impressions emerged. For example, in the initial discussion of under-achievement problems with the members of the experimental group, the investigator was struck by the number of pupils whose concepts of their own potential and the appropriateness of their achievement were quite vague. Of the forty original members of the group, sixteen rather definitely indicated their surprise at the measured disparity in ability and achievement. At another point in the first interview the matter of a possible reading deficiency, one of the items in the pupil data sheet, was discussed. Five of the ten who felt that their reading was weak had scored below their current grade placement on the reading section of the achievement battery; of the thirty not conscious of any reading handicap, sixteen fell below current grade placement. Other examples could be cited, but the implication is clear: pupils need to be given, and helped to interpret, information about their capacity and performance as a basis for realistic self-appraisal. Of course the availability of such data is a necessary prerequisite.

Much has been written on the complexity of the under-achievement problem. That the pupils themselves were aware of this to some extent was apparent in their analysis of possible causes of their own shortcomings. Although lack of study and difficulty with specific subjects were mentioned most frequently as possible causes, each of these reasons was given by only about one-third of the respondents. Typically, two or three possibilities were named, rather than a single factor. Twenty-seven different possible causes were designated by the members of the experimental group. In making plans to reduce under-achievement, a similar situation prevailed; a considerable variety of proposals emerged, with no single proposal being mentioned by more than one-third of the group. Thus, pupil assessments of the under-achievement problem as re-

vealed in this project tended to agree, in general, with those advanced by professional investigators.

Considerable similarity was observed in the degree of satisfaction with the level of school achievement felt by pupils and their parents. Of twenty-one pupils who indicated dissatisfaction with their achievement, seventeen said that their parents felt the same way. The parents of seven of the ten pupils who were satisfied with their achievement were reported to hold similar views. To the extent that this situation is generally true, it would appear that one approach to raising scholastic ambitions could well be made through the parents.

Another ally in the attack on the problem of under-achievement is undoubtedly the classroom teacher. In the course of the interviews, planning to see some teacher for help in a difficult subject was one of the most common proposals, but the proportion of these plans carried out was small. Follow-up by the pupils on this sort of plan was considerably less thorough than on any other, except improving use of time in study periods. It would appear that, if the situation here described is general, the class teacher may need to take the initiative in helping pupils to harmonize achievement and ability; the pupils seemed reluctant to do so. Furthermore, the effectiveness of teacher efforts to provide this kind of stimulation will be enhanced by providing him with accurate, recent data about the capacity and achievement of his pupils.

As stated above, the primary aim of this study was to find what effect, if any, the program of counseling described herein would have on the academic performance of the selected groups of under-achievers. Although the data favored the experimental group in most instances, the achievement-test scores failed to show clear-cut superiority for the counseled group. School marks for the experimental group were rather definitely superior. Since the consensus among both staff and pupils was that the content of the standardized achievement battery was not inconsistent with the local offerings, its curricular validity was deemed adequate. No evidence of excessive unreliability of teachers' marks was discovered. A possible explanation of the apparent inconsistency between these two criteria is that school marks represented chiefly an assessment of current performance in a subject area, while the test scores reflected total background. Presumably, then, of the two measures, the school marks would have been the more sensitive indicator. If this be the case, a conclusion that some improvement in academic achievement did occur as a result of the counseling procedures would be justified. Here, as in many guidance activities, more definite conclusions can be reached only through follow-up in later years. Such study should reveal the degree to which a rather marked improvement in some individual cases persists through higher grades, and it should bring to light any delayed effects of the counseling program.

## TEACHING THE ANATOMY OF CRITICISM

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THE responsibility for teaching criticism—the art of intelligent appraisal—seems to be one willingly assumed by a growing number of teachers. At adolescence, students may be presumed to have reached that point of maturation at which certain intellectual skills, among them the capacity to exercise sound critical judgment, are ready for more direct cultivation.

High-school students, and their teachers with them, are daily engaged in criticism. "Does *Moby Dick* present a better character study than *Stella Dallas*?" is a question calling for criticism in the English class. At the jukebox in the student lounge we hear, "I like Lena Horne's record of 'Love Me or Leave Me' better than Doris Day's." "Your swing is too choppy, Joe," says the gymnasium teacher. In a student-council session someone proposes, "I move we begin an honor study hall." In a social-studies class someone asks, "Was Dulles wise in taking sides with Portugal at Geneva?" Back and forth fly the questions and the judgments—in the classroom and out of it, in school and out of school. Such is the domain of criticism.

### A DEFINITION OF CRITICISM

Criticism, as it will be discussed here, is a verbally expressed act of evaluation. A person expresses an opinion or a preference, an acceptance or a rejection of something. He will usually, if called upon, give reasons for his opinion. If these reasons are then brought into question, he may be called upon to state the criteria or standards of judgment upon which he has based his appraisal.

Criticism also involves a general pro-

cedure followed by an individual whenever he states and supports an opinion or conclusion. Whether he judges the merits of a novel, appraises the soundness of a political argument, or merely tells why he likes raw rutabagas, the individual is engaged in criticism. As the term is used here, criticism carries no derogatory weight as in, "Jones criticizes his wife in public." A criticism can express praise as well as blame, for it is an act or process of assessment and evaluation. Thus literary criticism presupposes merely evaluation, and not necessarily the favorable or the unfavorable judgment of the critic.

It is suggested here that high-school students can learn certain general principles of criticism and can learn to apply them in any field of discourse where evaluations are expressed and explained. At the present stage of research such a proposition is necessarily viewed as a hypothesis subject to test and not as a stated claim. However, recent exploratory work with a Junior English class at the University High School of the University of Illinois suggests that rigorous testing of the hypothesis in the classroom may provide its most convincing support.

### A RECENT EXPLORATION IN THE TEACHING OF CRITICISM

The following is a brief account of what took place during the exploratory work mentioned above. The activities to be described were purely exploratory and were not conducted under experimental conditions. The writer made merely a first attempt to put into practice an idea that looked promising.

To launch the class upon a critical dis-



cussion, it was thought important to select a topic which would arouse active interest, stimulate general participation among boys and girls alike, and provide a common ground for conversation among students and between students and teacher. The range of abilities among students in the class would be found comparable to that in any public school. For our purposes a discussion of current jukebox stars and hit records proved to be "a natural."

We began by recording on the blackboard a number of opinions expressed by students as the discussion got under way. One such opinion was, "Rosemary Clooney is a good singer of commercial-type popular ballads." Next, under each statement of an opinion we listed the "reasons why" offered by the individual in support of his views. Under the statement about Rosemary Clooney three reasons were listed: (1) "She has a warm, womanly voice." (2) "Her songs are put across with novel techniques of accompaniment." (3) "Her voice is well suited to commercial ballad-type songs." The discussion was then pursued further by asking why these reasons were offered in support of the opinion about Rosemary Clooney. This resulted in the following series of statements: (1) "A singer's voice must appeal to most people's feelings." (2) "The piece must have some element of novelty in it." (3) "The voice and the song must be well matched."

Up to this point the discussion had been purely evaluative. We had gone through three distinct steps in expressing our evaluations. In the first step we had expressed and recorded statements of opinion, such as, "Rosemary Clooney is a good singer of commercial-type popular ballads." Then we had recorded statements expressing reasons for these opinions, for example, "She has a warm, womanly voice." Finally, we had listed statements made in support of the reasons. "A singer's voice must appeal to most people's feelings" is an example of the latter.

Now the discussion moved into a second phase, one of analysis. The teacher asked

the students to examine the three kinds of statements on the board and to tell what "jobs" they had been given to do. After some discussion it was decided that each kind of statement had its own job to do, although they all "went together" somehow. Statements expressing opinions and preferences we decided to call "ratings"; for they were used to tell how the speaker rated something—whether he rated a song as a good one or a bad one, and so on. It was understood that rating statements are made, not to describe something, but to express how somebody is judging some matter. Next, the students decided that the "reasons" did the job of telling why this or that particular song or singer was assigned the rating expressed in the rating statement. They were then asked to see if there was any difference between the reasons and the "reasons for the reasons," as the latter were first called. After some speculation two distinctions were drawn: (1) the "reasons for the reasons" seemed to be working as rules by which ratings were assigned to particular singers or records; (2) the reasons themselves did the job of showing how someone fitted the rule to the particular case.

At this stage someone suggested that "rules are for measuring things." So the teacher then asked whether the same rule could be used to make a rating of some other singer than Rosemary Clooney. "What about Georgia Gibbs? Can she sing commercial ballads?"

"No!" came the emphatic answer. "She's a belter—she sings the rock-and-roll stuff!"

"Well, then, what about this rule that 'a voice must appeal to most people's feelings'?" the teacher asked.

It wasn't long before someone made the observation, "You can use the same rule to show why Georgia Gibbs can't sing commercial ballads. She doesn't have the right kind of voice. She doesn't make you feel all emotional the way Rosemary Clooney does." Further discussion produced agreement that the same rule could be used to rate one singer favorably and another singer unfavorably with respect to some common

characteristic—in this case, the matter of emotional appeal in voice quality. It was a simple thing to go on to the observation that the same rule could be applied to any number of cases and thus be used to rate some singers favorably and other singers unfavorably as interpreters of the commercial ballad.

Before closing the discussion, we went back over the ground we had covered, making clear the distinctions we had drawn among ratings, reasons, and rules. The teacher emphasized the general character of the "rules," their wide applicability to all sorts of cases, and their function as measuring rods or standards for giving ratings. The "tailoring" function of reasons was also emphasized, to bring home their peculiar role in critical discussions: that of fitting the rule to the case at hand. Finally, we observed that we had done two kinds of things. First, we had expressed and recorded our appraisals of certain singers and pieces of music in the field of "pops" music. Second, we had then turned around and analyzed the jobs that our statements had been given to do and how these statements worked together. Thus ended the first discussion and the first adventure of the class into the domain of criticism.

It is to be noted that at no time in this initial discussion did the teacher introduce any strange or unfamiliar terminology. Toward the end of the conversation we began to use the word *standards* as a familiar synonym for what we had been calling "rules." It is also to be noted that, although the students were fully aware that the second phase of the discussion represented a different activity from the one in which they were first engaged, they seemed to have no difficulty in carrying on this analysis of their own statements and of the relations holding among them.

The discussion just reported proved a useful means for engaging students in criticism and in the analysis of the critical process. It was perhaps even more useful as a common point of reference when we moved into areas of study where the critical

judgments of people other than ourselves would be examined.

Work in Junior English soon brought us to a study of that most revered document of American letters, the Declaration of Independence. First we examined it for the grace and elegance of its language, for its clarity and precision of statement. Then we decided to trace the line of argument used in the Declaration of Independence to see what made it such a powerful and convincing document. Here we referred back to the earlier discussion about ratings, reasons, and rules. Were there any ratings expressed in the Declaration of Independence? Were there any reasons given for them? Were there any rules or standards upon which ratings and reasons might be based? The students, in a questing frame of mind, began a thoughtful analysis of this great American document. Space limits prohibit the reproduction of students' written and oral work in which they recorded their analysis of the argument of the Declaration of Independence. However, student responses were judged to be more than satisfactory as a whole, and because of these first "results" the writer was encouraged to carry the exploration further.

It may be asked whether students were at any point permitted merely to accept some rules or standards of judgment uncritically or whether their attention was turned to the critical evaluation of the rules themselves. The answer is that, in the beginning, the students' attention was centered upon the *function* of rules and their *relations* to other phases of evaluation rather than upon the substance or content of the rules. It was felt that, once students gained some notion of how rules are used in making judgments, they would be in a better position to evaluate rules themselves.

At this stage the class was prepared to move for the first time into a direct study of criticism in practice. They would be asked to study a variety of book reviews by literary critics; their task would be to discern the ratings, reasons, and rules used by these critics in appraising the books they

reviewed. In preparation for this step, two points left untouched in earlier discussions were brought out. The first point involved giving a name to what we had been doing. We referred back to the "jukebox discussion" and gave the name of *criticism* to the activity of expressing and explaining ratings assigned to various matters.

The second point brought out was that rules are not something fixed and final, to be followed or rejected blindly. Most rules, it was said, can be seen as the product of agreement among people. The more people who are found to agree, for example, that honesty is the best policy, the more strongly will this notion act as a rule to govern their behavior in matters of telling the truth. It was also pointed out that sometimes persons have their own rules, especially in matters of personal tastes and preferences. However, these "private" rules were seen to be those most often challenged and unfavorably criticized, especially if individuals use them without considering the tastes and feelings of others.

Finally, the students heard a brief description of the profession of criticism as it is practiced in the arts today. The fact was restated that criticism is a process or an activity which people carry on by oral or written discussion. It was stressed also that criticism is an act of judging or rating. Thus a critic might either praise or condemn a book, but in either case he would be acting as a critic.

The students were then sent to the Sunday book-review sections of the *New York Times*. Each was instructed to select a major review from a recent issue. He was then to write a report of the way the writer of the review made a criticism of his subject. The admonition was given more than once, "Remember, your task is to tell about the ratings, reasons, and rules that you think the critic used in his review. You are not asked to tell about the book he is reviewing except to show *how* he criticized it in his review." This was not an easy assignment; it required the student to examine the critical elements

of a book review without getting involved in a description of its substance.

Results were again encouraging, indicating in most cases that the students had grasped the idea that criticisms involve ratings, reasons, and rules. They were able to point out these features in the reviews they had studied. But two fairly common shortcomings cropped up, neither of which would be a surprise to teachers. In the first place, in cases where the critic failed to state explicitly some standard or rule of judgment that he was using (and this is most often the case), students did not venture their own inferences as to what standards seemed to be suggested in the ratings and reasons given in the review. The other weakness revealed in the papers was the tendency to get involved with the critic in his review—to applaud his opinions and to predict that the book was probably a good book if the critic had praised it highly. This tendency to agree with the critics indicated where, in future work along these lines, teaching would be necessary if students were to see criticism as a process which can be applied, upon appropriate occasions, to criticism itself.

#### THE PROCESS OF TEACHING CRITICISM

The first step in teaching students how to make sound evaluations involves acquainting them with the threefold process by which judgments are expressed and explained. Once students understand the distinction between ratings, reasons, and rules, and their relations to one another in the evaluative process, then it is time to examine more directly the bases of evaluation, the standards of judgment; for an understanding of what criticism is and how it is carried on by no means guarantees that an individual will use appropriate and sound criteria in his evaluations.

The next step in training students in the judgmental skills involves two ways of studying the rules or standards. First, the standards should be studied for the way they govern preferences. The standards that a person holds will cause him to judge a

matter in a certain way. Actions taken or opinions expressed upon the basis of certain standards often have serious consequences. The causal relation holding between a person's principles of evaluation and the actions he may take or the opinions he is likely to express is one that students should be led early to understand. Once they sense the weight of consequences that can follow from basing an action or an opinion upon a given criterion of judgment, students are likely to recognize more readily the crucial importance of grounding judgments upon appropriate, well-founded standards.

In the second way to study rules or standards, students should confront questions of what are "good" and "poor" standards for judging different matters. Students should not be permitted to adopt the absurd notion that, since anything can be criticized, there is no way of establishing one standard of judgment as better than another. It is true that anything can be criticized. It is equally true that rules and standards themselves are man-made to serve man's purposes and are therefore fallible. Students have a right to understand that such is the case. But then to deny, or even to fail to insist, that there are good standards as well as poor ones is to deny all that man has struggled for in his search for knowledge and the good life. Even worse, it is to foster sophomoric cynicism and intellectual irresponsibility—both harbingers of social and moral chaos.

Students should be brought to a thoughtful examination of standards always within a particular *context* of judgment. Here "context" means more than just the subject matter or domain of discussion in which criticism is carried on. The context of discussion includes not only the subject discussed but also the purposes for which evaluation is being made. A consideration of the purposes must necessarily involve the roles and relationships among the individuals participating in the discussion. These considerations are important because they determine what criteria of judgment will be appropriate to a given criticism. For example, in critical discussions of literature,

it may at one time be the purpose to rate a work for its status as great literature. At another time a book may be appraised as an expression of the culture or era in which it was written. Upon another occasion someone may be recommending a book for vacation reading or as a sure-fire soporific. Clearly, the criteria by which a book is judged to be of great or miserable literary quality are of a different order from the criteria by which a book is rated a good or a poor document of the era whence it sprang.

In social studies, science, and English classes, the purposes for which a critical discussion is conducted will determine what criteria are appropriate to the situation. Are students formulating their own principles of procedure for a given task? Are they learning through critical discussion what principles of scientific experimentation have been found most reliable? Or are they learning criteria for assessing the qualities of statesmanship? The purposes of both students and teachers always enter into determinations of what criteria are to be used in making criticisms. But, by virtue of the teacher's role, his purposes must often determine what criteria are to be used as the basis of criticism in a class discussion; for the teacher is, or should be, the arbiter of what educational values are to be realized through the conduct of any critical discussion in his classroom.

#### CONCLUDING REMARKS

Some of the following points have been mentioned or are implied in the foregoing discussion. However, in conclusion it may be helpful to state them as related groups of explicit understandings toward which students should be guided in their study of criticism.

1. Criticism is an act of evaluation verbally expressed. It presupposes neither unfavorable nor favorable judgment. It is carried on by the use of three types of statements, each representing a distinct phase of the critical process. In discourse, standards are usually left implicit or unexpressed unless they are called for. Ratings and reasons

should be examined for standards which seem to be implicit in them.

2. Criticism is an instrument for clarification and understanding as well as one of appraisal. Persons who are familiar with the critical process and are aware of the role that standards play in expressions of opinion possess the means by which to discover whether differences of opinion are "merely verbal" or whether they arise because disputants are using different standards of judgment.

3. Criticism is a general process, one that can be carried on profitably in a great variety of situations. Standards are also general. The same standard can be used to reject, as well as to accept, given items under appraisal. With respect to some questions,

a single standard can be applied to great numbers and varieties of cases.

4. Criticism is always carried on within a context. The context includes both the purposes and the relationships of the people involved as well as the subject matter under discussion. The context determines to a great extent what standards of judgment are appropriate to a critical discussion.

5. Criticism itself can, and often should, be criticized. This does not mean that any one set of standards is as good as any other set. There are both good and poor standards of judgment; there are means for establishing their reliability. The importance of basing opinions and actions upon appropriate and well-founded standards is seen in the consequences of their use.



## SELECTED REFERENCES ON THE ORGANIZATION AND ADMINISTRATION OF SECONDARY EDUCATION

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THE NUMBER of articles published in the area of secondary-school organization and administration during the year covered by this bibliography precludes listing all those of merit. The articles that are in-

cluded are, in the opinion of the compilers, representative of the material published during the twelve-month period from June, 1955, through May, 1956.

### ORGANIZATION

#### GENERAL

559. KOOS, LEONARD V. "A Recent 6-4-4 Reorganization," *School Review*, LXIV (March, 1956), 101-7.

Describes a program in operation; considers the prospects for the 6-4-4 plan; and compares the 6-4-4 and the 6-3-3-2 types of organization.

560. KOOS, LEONARD V. "School Organization in Recent Textbooks in Education," *School Review*, LXIV (March, 1956), 129-35.

Analyzes statements on patterns of school organization in textbooks in education, considers the purpose of the new units, and indicates the preferred types of organization.

#### JUNIOR HIGH SCHOOL

561. CLEVENGER, A. W. "Trend away from the Eight-four Plan in North Central Territory," *North Central Association Quarterly*, XXX (January, 1956), 284-94.

A historical study of reorganized high schools in the Middle West over a half-century.

562. JOHNSON, MAURITZ, JR. "Three Things To Look for in Evaluating a Junior High School," *School Review*, LXIV (March, 1956), 136-40.

Suggests that evidences of balance, flexibility, and participation should be considered in determining the effectiveness of a junior high school.

563. LOUNSBURY, JOHN H. "What Has Happened to the Junior High School?" *Educational Leadership*, XIV (March, 1956), 368-73.

Discusses the functions of the modern junior high school.

#### JUNIOR COLLEGE

564. MARTORANA, S. V. "Recent State Legislation Affecting Junior Colleges," *Junior College Journal*, XXVI (February, 1956), 328-41.

Summarizes legislative actions and identifies trends in state laws affecting junior colleges.

565. *The Public Junior College*. Prepared by the Yearbook Committee, B. LAMAR JOHNSON, chairman. Fifty-fifth Yearbook of the National Society for the Study of Education, Part I. Chicago: Distributed by the University of Chicago Press, 1956. Pp. xii+348.

Examines the growth, status, and purposes of the junior college.

566. WALLACE, EARL S. "Trends in Junior Colleges during the Past Decade," *Junior College Journal*, XXVI (January, 1956), 273-80.

Traces the changes found in one hundred junior colleges which were revisited after an interval of ten years.

#### ARTICULATION

567. MYERS, ALONZO F. (editor). "Articulation between High School and College," *Journal*

of *Educational Sociology*, XXIX (January, 1956), 193-232.

Discusses selected problems in the area of improving the articulation between the secondary school and the college.

#### VOCATIONAL EDUCATION

568. GAUSMAN, CHESTER A. "Legal Aspects of Shop Accidents," *Industrial Arts and Vocational Education*, XLIV (September, 1955), 207-11.

Contains examples of decisions rendered in court cases involving injuries sustained in school shops.

569. LOWENS, MILTON. "Automation and Vocational Education," *High Points in the Work of the High Schools of the City of New York*, XXXVIII (January, 1956), 30-35.

Considers some of the implications of automation as they may sooner or later affect vocational high schools.

#### ADULT EDUCATION

570. *Adult Reading*. Prepared by the Yearbook Committee, DAVID H. CLIFT, chairman. Fifty-fifth Yearbook of the National Society for the Study of Education, Part II. Chicago: Distributed by the University of Chicago Press, 1956. Pp. x+280.

Explores the many aspects of adult reading, including those that contribute to, and those that retard, its development.

571. DALTON, JOHN E. "Adult Education in Small Population Centers," *American School Board Journal*, CXXXI (October, 1955), 28.

Contends that adult education can be offered in smaller communities and cites examples of such programs.

572. ESSERT, PAUL L. "Programs in Adult Education," *School Executive*, LXXV (January, 1956), 101-2.

Suggests that organized programs of adult education will result in the improvement of all other levels of education.

573. ROSENBERGER, HOMER TOPE. "Offerings for Out-of-School Adults," *Bulletin of the National Association of Secondary-School Principals*, XL (February, 1956), 181-93.

States that the adult-education program offers a fertile field for the educator to make a useful contribution to society.

574. WETZEL, PAUL W. "What Are We Doing for School Drop-outs?" *American School Board Journal*, CXXXI (October, 1955), 29-31.

Points out that large numbers of adults have not completed high-school training and that something must be done to help them meet present requirements for employment and promotion.

#### ADMINISTRATION

##### GENERAL

575. BESTOR, ARTHUR. *The Restoration of Learning*. New York: Alfred A. Knopf, Inc., 1955. Pp. xviii+460+xii.

A scathing criticism of public secondary schools, which should be read by all administrators so that they may be prepared to discuss it intelligently.

576. CONWAY, DON. "Religion and Public Education in the States," *International Journal of Religious Education*, XXXII (March, 1956), 34-39.

A summary of legal regulations relating to religion in the forty-eight states.

577. FINE, BENJAMIN. "Annual Review of What's New about Schools," *Parents' Magazine*, XXX (October, 1955), 53-55.

A summary by the education editor of the *New York Times*.

578. PUNKE, H. H. "Improved Educational Backgrounds of Alabama High School Principals," *Bulletin of the National Association of Secondary-School Principals*, XL (May, 1956), 59-71.

A statistical study of the training of high-school principals over a period of twelve years.

579. RICH, K. W. "Present Status of the All-Year Secondary School," *California Journal of Secondary Education*, XXXI (January, 1956), 18-24.

Reports a study which showed little use of the year-round school.

580. SPALDING, W. B. "Current Problems Facing Education in the United States," *Education*, LXXVI (February, 1956), 331-40.

A penetrating analysis of contemporary problems in education.

581. WALSH, J. H. "Education in 2000 A.D.," *Nation's Schools*, LVII (April, 1956), 47-51.

Attempts to portray changes in education necessitated by longer life-expectancy, greater leisure, automation, and other social factors.

582. WIDMAYER, RUTH. "Recent Developments in Soviet Education," *School Review*, LXIII (November, 1955), 438-42.

A statement of the expanding educational system in Russia.

#### DEMOCRATIC ADMINISTRATION

583. BRANDES, LOUIS G. "The Position of the Subordinate Administrator in the Secondary School," *Bulletin of the National Association of Secondary-School Principals*, XL (May, 1956), 46-52.

States the need for the position of subordinate administrator but does not try to set standards.

584. CARR, W. G. "America's Needs and Resources in Education," *School Executive*, LXXIV (June, 1955), 54-56.

A thoughtful statement by the executive secretary of the National Education Association.

585. CONANT, J. B. "The Unique Features of Our American Schools," *Bulletin of the National Association of Secondary-School Principals*, XL (May, 1956), 5-14.

A statement on the secondary schools by one of America's leading statesmen.

586. HINES, V. A., and GROBMAN, HULDA. "What a Principal Does, Matters," *Phi Delta Kappan*, XXXVII (April, 1956), 308-10.

Reports the findings of a three-year survey of the manner in which principals reacted to common on-the-job school situations.

587. MANNING, WILLIAM R., and OLSEN, LIONEL R. "Democratic Social Climate," *Nation's Schools*, LVI (October, 1955), 82-83.

Cites five basic tenets of American democracy and discusses their implications in terms of the social climate in the school.

588. MARTIN, CLYDE. "The Oregon Evaluative Criteria Program," *Bulletin of the National Association of Secondary-School Principals*, XL (May, 1956), 34-38.

Reports on the evaluation of eighty-five Oregon high schools.

589. OLSON, A. R., and JONES, E. G. "Opening a New School," *National Elementary Principal*, XXXV (May, 1956), 9-12.

A well-written account of the planning which should be done before a new school opens.

590. SEEGER, MARTIN L., III. "A Twenty-Year Sampling of Teacher Attitudes," *School Executive*, LXXV (December, 1955), 46-48.

Reviews the literature to determine the extent to which theories of democratic administration have been applied.

591. SPALDING, H. G. "Educational Statesmanship as a Principal Sees It," *Bulletin of the National Association of Secondary-School Principals*, XL (May, 1956), 15-22.

A thoughtful statement on the duties of a principal today.

592. STORTS, RALPH. "How Is Democratic Administration Developed in a Modern School?" *Bulletin of the National Association of Secondary-School Principals*, XL (April, 1956), 51-54.

Describes the operation of a student-faculty organization which aided in the development of a democratic administration.

593. WIGGINS, S. P. "The Southern High School Principal," *Bulletin of the National Association of Secondary-School Principals*, XL (May, 1956), 72-79.

Discusses the problem of the southern high-school principal with relation to desegregation.

#### PUPIL PERSONNEL

594. BLOOM, B. S. "The 1955 Normative Study of the Tests of General Educational Development," *School Review*, LXIV (March, 1956), 110-24.

A statistical study of the achievement of high-school students based on the GED tests, showing educational development, amounts spent for education, and per cent of college entrants in the forty-eight states.

595. "Education of the 'Non-academic Pupil' in Secondary Schools: A Symposium," *California Journal of Secondary Education*, XXXI (January, 1956), 45-61.

States what is thought to be needed to retain non-academic students in school.

596. HAMRIN, S. A. "Improving Student Personnel Practices for the Impending Tidal

Wave of Students," *Junior College Journal*, XXVI (September, 1955), 15-26.

Discusses five suggestions for improving student personnel practices.

597. LOWENSTEIN, N. "High Schools and Social Class Structure in America," *Bulletin of the National Association of Secondary-School Principals*, XXXIX (May, 1955), 155-58.

A plea to sensitize the staff to social-class structure and to use the curriculum to reduce social-class structure.

598. MACDONALD, LORETTA MCBREEN. "Measuring the Effectiveness of Counseling," *Clearing House*, XXX (October, 1955), 116-17.

Reports the findings of a study based on the case records kept by counselors.

599. MYER, A. M., and HANNELLY, ROBERT J. "The Student Personnel Program," *The Public Junior College*, pp. 191-212. Fifty-fifth Yearbook of the National Society for the Study of Education, Part I. Chicago: Distributed by the University of Chicago Press, 1956.

Contains examples of the variety and perplexity of problems faced by youth of college age.

600. RYAN, MONICA D., and OTHERS. "Guidance Practices in Academic High Schools," *High Points in the Work of the High Schools of the City of New York*, XXXVII (September, 1955), 5-45.

Describes guidance practices as reported by New York City academic high schools.

#### DISCIPLINE

601. LEE, EDWIN A. "Is Discipline the Answer to Delinquency?" *School Executive*, LXXV (April, 1956), 60-61.

Contends that school executives must attack the problem of delinquency realistically and fearlessly.

602. OLIVA, PETER F. "High School Discipline in American Society: A Primer on Democratic Discipline in Its Social Context," *Bulletin of the National Association of Secondary-School Principals*, XL (January, 1956), 1-103.

Directs attention to the need for advancement of reformative and preventive discipline, with emphasis on the role of self-discipline.

603. SCHMIDTCHEN, PAUL W. "Discipline: A Confusing Dichotomy," *Clearing House*, XXX (April, 1956), 459-61.

Argues that discipline in school or elsewhere is a fine thing but that it can be overdone.

604. SHREVE, R. H. "We Are Abolishing Study Halls," *Clearing House*, XXX (October, 1955), 94-97.

Tells how one school solved the study-hall problem.

605. SIEGEL, L., COON, H. L., PEPINSKY, H. B., and RUBIN, S. "Expressed Standards of Behavior of High School Students, Teachers, and Parents," *Personnel and Guidance Journal*, XXXIV (January, 1956), 261-66.

A study which shows greater disagreement within groups than between groups in the stated opinions.

#### FINANCING ACTIVITIES

606. BURRUP, PERCY E. "Handling the Finances of Student Activities," *Nation's Schools*, LVI (November, 1955), 87-88.

Suggests twelve basic principles which the high school might adopt for handling the finances of the various student activities.

607. COZART, A. EILEEN. "The Ways and Means of Administering School Activities," *School Activities*, XXVII (February, 1956), 179-83.

Describes the procedures followed in a class which employed the technique of role-playing to gain a realistic picture of the ways of administering activity programs in schools.

608. DUGAN, LUCILLE. "How To Plan the Social Program in a Large High School," *Bulletin of the National Association of Secondary-School Principals*, XXXIX (November, 1955), 104-7.

Reports on a social-activities program in which an attempt was made to give every student an opportunity to participate.

609. KOSS, H. A. "How Free Is It, for the Kids?" *School Activities*, XXVII (October, 1955), 45-47.

A study dealing with the "hidden costs" in high school.

610. OLSEN, OLA A., and RIEKE, LOLA E. "Manual for Treasurer of Class or Club," *School Activities*, XXVII (January, 1956), 154-56.

Contains illustrations of information forms and blanks which are included in a booklet issued to student finance officers.

611. UNRUH, ADOLPH, and BECK, NORMAN. "State Controls over Extracurricular Activities," *Clearing House*, XXX (December, 1955), 244-46.

Reports findings of a nationwide study of states which have enacted or proposed legislation on management of extra-curriculum funds.

#### PUBLIC RELATIONS

612. BRYAN, R. C., and BEISEL, MILDRED. "Vitalize Your High School PTA," *Bulletin of the National Association of Secondary-School Principals*, XL (May, 1956), 139-45.

A well-written account describing the success of a parent-teacher-student association in a campus school.

613. DORFF, JOSEPH A., and PETERS, KENNETH L. "How Can the School Develop Good School-Community Relations?" *Bulletin of the National Association of Secondary-School Principals*, XL (April, 1956), 277-81.

Outlines the principal's role in a public relations program and discusses the media employed in interpreting the school to the community.

614. PLUTTE, WILLIAM. "Introducing the New School," *School Executive*, LXXV (February, 1956), 68-69.

Discusses the steps taken in a new high school to make relations between administrator, teachers, pupils, and parents smooth and effective.

615. SCHOOLING, H. W. "Educating about Education," *School Review*, LXIV (January, 1956), 3-7.

Contents that the principal factor which determines why some schools are better than others is the knowledge and understanding that the

community has about its schools. Suggests that one remedy for the lack of understanding is to include in the school curriculum a study of public education.

#### STANDARDS AND ACCREDITATION

616. JESSEN, C. A. "The Cooperative Study of Secondary School Standards after Twenty-one Years," *North Central Association Quarterly*, XXX (October, 1955), 219-25.

Reviews the program of the Cooperative Study of Secondary School Standards and points out that data for accreditation now come from various sources including staff self-evaluation, visiting-committee evaluation, and the use of check lists and evaluative criteria.

617. ROMINE, STEPHEN. "A Look Ahead at Accreditation in the Secondary School," *North Central Association Quarterly*, XXX (April, 1956), 339-43.

Identifies six trends which are now beginning to appear in secondary-school accreditation, such as more concern for stimulation and leadership services, bringing boards of education into a more active role in the North Central Association, closer co-operation between high schools and colleges and universities, more self-appraisal, a greater emphasis on public relations, and a more qualitative concept of standards.

618. WRIGHT, GRACE S. *State Accreditation of High Schools: Practices and Standards of State Agencies*. Office of Education Bulletin 1955, No. 5. U.S. Department of Health, Education, and Welfare. Washington: Government Printing Office, 1955. Pp. iv+82.

An authoritative study of accreditation by state departments of education.



## EDUCATIONAL WRITINGS



### REVIEWS AND BOOK NOTES

WILLIAM S. GRAY and BERNICE ROGERS, *Maturity in Reading: Its Nature and Appraisal*. Chicago 37: University of Chicago Press, 1956. Pp. xii+274. \$5.00.

This book is a unique, pioneering work in the field of reading. It builds on previous studies of what adults read, why they read, and how they read, which were most recently reviewed and amplified in *Adult Reading*, the Fifty-third Yearbook of the National Society for the Study of Education. Since these scattered reports on specific aspects of adult reading furnish an inadequate basis for constructing "a meaningful description of the reader as a total personality in an actual reading situation" (p. 45), there is need to review various concepts of maturity in reading, weave together many strands of related research, and collect case-study data. There has been no comparable previous synthesis of the disciplines of dynamic psychology, clinical study, experimental research, and human development, nor has reading maturity been adequately considered as part of general maturity and as a process rather than an end result achieved at a certain age. Although, as the authors say, "the need is widely recognized for a high level of competence in reading among young people and adults, very few detailed analyses have been made of what is involved" (p. 51).

The organization of the book is like that of a well-planned estate. First the background and setting receive consideration. Then the framework is erected, and the methods and materials to be used in building the structure are selected. The original data, collected and organized in a meaningful way, constitute the building itself; and it is richly furnished with case studies and with perceptive analyses and interpretations.

The setting is given in a brief review of our present knowledge of adult reading—the current status of reading and the emerging emphasis on the case-study approach to an understanding of reading as part of the individual's total development.

The framework of the concept of maturity in reading and through reading is firmly built. The mature person possesses "a unifying philosophy of life" (p. 48) and a social purpose which motivates his reading.

The case-study technique is appropriate to the authors' concept of maturity in reading. Incorporated in each interview was an informal reading test to ascertain the subject's "ability to understand, interpret, and react to what he read" (p. 59). Encouragement of free responses yielded more insight into the reading process than did "formally structured questions" (p. 59). In the course of the investigation, a scale for the appraisal of maturity in reading was developed; each item was selected and described with meticulous care. This scale, derived from the preliminary investigation, was then applied to additional cases, with a careful recognition of its value and its limitations. In all, three groups of adults were interviewed: a very heterogeneous group of twenty-one adults, a sampling of thirty-eight from a typical midwestern city, and a third group of twenty-one adults who were reputedly "well read."

The data thus collected are presented, first, as fascinating case studies representing different levels of maturity and, second, in the form of a summary, which shows both their range and their central tendencies in terms of the criteria included in the scale.

This study makes a most valuable contribution to the theory of maturity in reading, to the methodology of research, and to the solution of practical problems of improving reading in high school and college and in adult-education programs. It reinforces or supplements the concept of reading, not only as part of a constellation of communication skills, but also as an expression of individuality and of social purpose. To other investigators it offers an instrument for developmental studies of reading and for research on the role which the reading process plays in the lives of individuals. Reading teachers and specialists will find in the book

an extension of their horizons and a valuable tool for the appraisal of student progress toward the goal of greater maturity in reading. Such maturity seems to stem from "a concern and responsibility for a better life and a better society" (p. 235).

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RUTH STRANG



HAROLD M. BYRAM and RALPH C. WENRICH,  
*Vocational Education and Practical Arts in  
the Community School*. New York 11:  
Macmillan Co., 1956. Pp. x+512. \$5.50.

A community school is a school conducted for an education-conscious community. The task of making a community health-conscious, defense-conscious, religion-conscious, education-conscious, and so on, is a challenging one. When there is no crisis sufficiently severe to shake the typical community into action, the inclination is to "let George do it" in whatever field of special concern he happens to be considered the responsible authority. In most communities the price of leadership in any field is loneliness. Almost everyone would agree that this is not as it should be and that genuine leadership affects the entire community, but it somehow or other seems true that citizens in the abstract have so many responsibilities that citizens in flesh and blood find it an inconvenience even to exercise their franchise, much less to get stirred to the point of concern about what makes up a good program of formal schooling.

The authors of this book assume that somehow communities can be stimulated to interest themselves genuinely in their schools and that, on the basis of cited questionnaires, citizens think highly of vocational- and practical-arts contributions to education. This faith and knowledge encouraged Byram and Wenrich to make a very useful contribution through the substance of their book.

They first describe a community school. How much of this is the outcome of creative imagination and how much stems from experience in dealing with communities, the reviewer is in no position to evaluate. It is, however, an interesting description.

The authors then deal with vocational education and society, the nature and contribution of the practical arts, the elementary-school program of practical arts, vocational education

and practical arts in the secondary-school program and for adults, improvement of instruction in vocational and practical-arts education, and the organization and administration of these special fields.

The reviewer was especially interested in this book because of the effective manner in which the authors describe similarities and differences in vocational training and practical-arts education. So often these are not mentioned or demonstrated in day-to-day teaching by the typical teacher of shop or drawing. The contribution of practical arts toward the general education of "all the children of all the people" needs more modern-day prophets. These authors make some prophetic statements in this regard which should be read by all who are interested in education. Their comments about the value of vocational training are more traditional in character and in general acceptance, especially among vocational-training instructors.

As one reads from the earlier chapters, which advance so effectively the community's concern about the details of how their community school should be run, to the later chapters, one senses a shift from liberality to dogma. Typical of the spirit of the chapter on organization and administration (chapter xxix) is the statement: "Regardless of the size of the community the people living in it have a need for the whole scope of educational services which vocational education and practical arts can provide" (p. 461). Says who? The earlier chapters gave the reviewer the impression, rightly or wrongly, that it was the community that would decide upon its educational needs. If the educational leaders already know the needs, why go through an exercise with a community which in many cases would have preferred not to have been disturbed in the first place? If the community is to be in on the determination of needs, objectives, and curriculum, then by the same token it should help determine organizational and administrative procedures. If the community is not equipped to do the latter, then most certainly it is not prepared for the former.

After reading this book, the reviewer is so much more stimulated by its positive contents than by any of its limitations that he is pleased to retain a copy of it on his own bookshelf. Typically, after books are reviewed, they are either sent to the library or filed in the round file.

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C. A. WEBER and MARY E. WEBER, *Fundamentals of Educational Leadership*. New York 36: McGraw-Hill Book Co., Inc., 1955. Pp. xii+280. \$4.50.

C. A. and Mary E. Weber in their book, *Fundamentals of Educational Leadership*, have sought to describe the nature of educational leadership in a democratic society. Their book has been written for the edification of any thinking person who might aspire to play a leadership role in public education but especially for school administrators, board members, teachers, and parents. After a thorough review of the literature on leadership, the authors have taken the view that school leadership is not just the prerogative of school officials with status but is a function of each thinking person in the society.

The Webers have chosen to deal with their subject in two parts. In Part I they discuss five major topics: (1) the meaning of democracy, (2) the basic values underlying this concept of democracy, (3) the personal-qualities theory of leadership, (4) the situational theory of leadership, and (5) the nature of educational leadership in a democratic society.

The gist of their first section might be stated as follows: Democracy is a system of controls developed, through co-operation and consensus, for the welfare of all its people. The welfare of people should be measured in terms of growth in biological vigor, mutuality, the use of intelligence in problem-solving, and creativity in thought and action. The growth and development of all people in these four ways becomes the aim of leadership in a democratic society.

A review of the research and literature dealing with existing notions about leadership brings the authors to synthesize a theory of leadership which embraces a combination of the personal-qualities theory, the situational, and group dimensional factors. After arriving at a basic theory of leadership, they proceed to an interpretation of educational leadership which harmonizes with their leadership theory and their concept of democratic control. In the authors' terms, leadership means:

... the process, in a situation, which promotes democratic control, which yields agreements concerning principles and policies, and which brings about common agreements concerning plans of action which are consistent with principles and policies which have been developed by the group (p. 82).

This view of leadership as a means of promoting democratic control is the keystone of the entire treatise.

In Part II of the book, fundamental principles of leadership resulting from basic concepts presented in Part I are stated and developed. The first of these principles admonishes democratic leaders to gain a thorough understanding of the meaning of democratic control, situational forces, and the nature of the learning process. A second principle of educational leadership emphasizes the need for commitment to, and consistent practice of, democratic control in relationships with school staff, community, and pupils. The next principle of leadership emphasizes the importance of attacking the least controversial aspects of a problem first, leaving plans of action about which there are likely to be wide differences of opinion to the later stages of the discussion after goals have been discussed and agreed upon. A fourth principle describes the skills necessary for democratic leadership, namely, skills in making inquiry, in analyzing situations, and in discovering attitudes, beliefs, and commitments of members. The advantages of gaining co-operation by means of teamwork as compared to compromise are stated as a fifth principle of leadership.

A sixth principle states that group participation in policy formulation should be fostered in direct proportion to the abilities of individuals in the group to foresee consequences. A seventh lists three personal traits—imagination, insight, and the willingness to take risks—as important aspects of successful leadership. Another proposition asserts that status leaders should be members of the school's groups, not external to them, and that they should understand their chief function as one of carrying through on plans of action devised by these groups. And a ninth principle states the importance of mental and physical vigor, friendliness, promptness, and integrity in contributing to the success of democratic leadership.

A final chapter answers the charge that democratic leadership is slow and inefficient. The reply to this charge is contingent on the meaning given the word *efficiency*. The authors reason that, if educational efficiency is to be judged in terms of maximum development brought about in each individual and if these are the goals and purposes assigned education, then democratic leadership is without a doubt the most efficient. The function of educational leadership, in the authors' view, is to help the

people in a community come to agreements and decisions with regard to the goals of public education.

This book, in my view, is primarily a philosophic approach to democratic leadership. Its authors have set forth a clear definition of the goals and aims of educational leadership and have described, in general terms, the nature of this type of leadership. This may well be all that the authors intended to do, and certainly they have made a positive contribution to the literature of educational leadership in their efforts to combine the concepts of democracy with sound leadership theory for this field.

It should be pointed out, however, that a philosophic description of leadership is not adequate for telling the whole story of successful leadership. There are numerous psychological complexities to be described, recognized, and planned for in the total leadership situation. Although these authors mention such psychological aspects of leadership as attitudes, beliefs,

and commitments of group members and suggest that different situations require different types of leadership, they have scarcely built these factors into their guiding principles for democratic leadership. They seem always to be talking of the ideal and never quite face the reality of the actual situation. In my view, the recognition of attitudes, anxieties, role conflicts, and other informal relationships between members of the group and between the leader and his group, as well as insights into effective ways of dealing with conflicts that arise from these factors, are essential to successful leadership. This is to say that teamwork and co-operative action ideally might be based on unanimity of purpose but in actuality are seldom accomplished on this basis alone, because of the many psychological complexities which arise between people in their interpersonal relationships.

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Selected RONALD Books - 1955  
PRINCIPLES and PROCEDURES of CURRICULUM IMPROVEMENT

# WHO'S WHO FOR NOVEMBER

**Authors of news notes and articles** The news notes for this issue have been prepared by ROBERT E. KEOHANE, chairman of the Department of Social Sciences, Shimer College, Mount Carroll, Illinois. LLOYD E. MCCLEARY, administrative assistant in the Evanston Township High School, Evanston, Illinois, reports an experimental project designed to alter the group structure of a junior high school class which was divided into three distinct groups. JACK R. FRYMIER, core teacher in the P. K. Yonge Laboratory School, University of Florida, points out the need for teaching American children to make choices and suggests areas of school life in which they might exercise some choice. GEORGE A. W. STOUTER, JR., professor of psychology and director of the Psychological Clinic at State Teachers College, Indiana, Pennsylvania, reports an investigation in which the attitudes of secondary-school teachers toward certain behavior problems of children were compared with the attitudes of elementary-school teachers and mental hygienists toward the same problems. HAROLD MORRILL, formerly a teacher of English in high school and now in private industry, proposes combining the study of history and litera-

ture by using a teaching technique in which students begin their reading and study in a recent era and then travel backward chronologically to earlier and less familiar eras. CHARLES C. COWELL, professor of physical education at Purdue University, reports a questionnaire study designed to discover the extent to which the school systems sampled have representative competitive school teams for girls and to determine the opinions of superintendents and state directors of physical education concerning the values in girls' athletic programs. FRANCES SWINEFORD, head of the Test Analysis Section of the Department of Statistical Analysis of the Educational Testing Service, Princeton, New Jersey, presents a list of selected references on statistics, the theory of test construction, and factor analysis.

**Reviewers of books** GEORGE E. BARTON, JR., director of the Interdepartmental Program for the Training of Teachers, Tulane University, New Orleans, Louisiana. DAVID R. KRATHWOHL, research co-ordinator, Bureau of Research and Service, Michigan State University, East Lansing, Michigan.

## HIGHLIGHTS OF OUR NEXT ISSUE

MONROE L. SPIVAK will report a study of the academic achievement and school adjustment attained in the ninth grade of a junior high school by a group of pupils whose seventh- and eighth-grade work had been done in a departmentalized organization and a matched group of pupils who came from a "regular" elementary school with self-contained classrooms. GRACE S. WRIGHT, assistant specialist in secondary education,

Office of Education, United States Department of Health, Education, and Welfare, summarizes the Doctor's dissertations concerned with the core program that were completed in the period 1946-55. She supplies a complete list of these dissertations and describes them in terms of the areas studied. She then suggests aspects of the core curriculum in which research is still needed.

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## Selected RONALD Books — 1956

### PRINCIPLES and PROCEDURES of CURRICULUM IMPROVEMENT

VERNON E. ANDERSON, *University of Maryland*

**Discusses all aspects** of curriculum construction and improvement in school and classroom, with illustrations from elementary, secondary, and college levels. Book contrasts the experience-centered or problem-solving approach with the subject-centered approach. Evidence from research in child and adolescent psychology, social psychology, learning theo-

ry, anthropology, and sociology is presented in terms of implications for the curriculum. Devotes special attention to the human relationships and practical procedures involved in putting through curriculum change. "This is about as comprehensive a book on curriculum development as has ever appeared."—*Education*. 468 pp.

### THE HIGH SCHOOL CURRICULUM—2nd Edition

Edited by HARL R. DOUGLASS, *University of Colorado*

**This new survey** of current curriculum theory and practice represents the combined experience of 28 well-known educators. Examines the historical, psychological, and social foundations of the curriculum, and the principles and techniques of curriculum construction and revision. Stresses the progress toward elimination

of boundary lines between school subjects; the movement to diversify and expand the learning experience; the unification of learning by use of larger units. "... should prove very useful as a stimulus and guide to teachers in service, and as a textbook for courses on the high school curriculum."—*The Bulletin*. 380 pp.

### THE MODERN JUNIOR HIGH SCHOOL—2nd Edition

WILLIAM T. GRUHN, *University of Connecticut*; and  
HARL R. DOUGLASS, *University of Colorado*

**Also new.** A guide for teachers and administrators, this book presents the history, philosophy, and functions of the junior high school. Describes current curriculum and administrative practices and suggests improved educational programs. Guidance bulletins and programs from representative schools are ex-

amined, and contrasting viewpoints are summarized for comparison. Presents ideas and data from numerous recent surveys including a study of current practices in 370 junior high schools. "... It is an outstanding text and one that can be used with confidence."—*Merle Strom, Ball State Teachers College*. 421 pp.

### SCHOOL BUSINESS ADMINISTRATION

Edited by HENRY H. LINN, *Columbia University*

**The first, complete survey**—by 16 authorities—of all the principal business activities and problems related to running the public school system today. Details major business responsibilities—office and personnel management, budgeting and accounting, debt service, purchasing and supply management, plant opera-

tion and maintenance, food service and transportation, etc. Gives many suggestions and leads for improvement. "... a welcome book which presents the hard facts of school affairs, and the practices and principles which are currently considered true and effective."—*The American School Board Journal*. 46 illus., tables; 574 pp.

### AUDIO-VISUAL PROCEDURES in TEACHING

LESTER B. SANDS, *University of California*

**A new, complete survey** of audio-visual materials and procedures for every level of education. A separate chapter covers each type of audio-visual aid, giving a full analysis of its uses, possibilities, and limitations. Book relates each type of instrument and procedure to the whole teaching process; integrates modern psychological and philosophical viewpoints

with concrete descriptions and practical examples. The wealth of well-chosen illustrations is closely tied to the text. Includes laboratory exercises and extensive lists of source materials. (Keyed Examination Questions available to instructors on request.) "... encompasses the broadest view of the field to date."—*The School Review*. 271 illus., tables; 670 pp.

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